Designing online training to improve best practice among the substance misuse workforce
a mixed methods study

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1 Abstract

Background: Well-designed online learning resources for substance misuse workers (SMW) have the potential to improve delivery of best practice for addiction treatment service users. Principles of User Centred Design, the Technology Acceptance Model and Rogers' Diffusion of Innovation emphasise the importance of understanding the end-user when designing online learning resources. There is currently very little known about SMW who work for third-sector addiction treatment organisations in England.

Methods: A convergent mixed-methods design was used to identify the characteristics, working contexts, training needs and preferences, barriers and facilitators to training, use of online resources and use of technology of SMW. An online survey collected quantitative data. Qualitative data were collected in semi-structured interviews with SMW and key stakeholders (KSH). Descriptive statistics, t-tests, One-way ANOVA and latent class analysis were used to analyse the quantitative data. Iterative Categorisation was used to analyse the qualitative data.

Results: 200 SMW participated in the online survey. 31 SMW interviews and 14 KSH interviews were conducted and analysed. Training needs in advanced clinical techniques, therapeutic relationship skills, reflective practice, dual diagnosis, managing stress and burn out and refresher courses in therapeutic skills were identified. Participants regularly searched the internet in an unstructured way and were often unable to interpret research-based information that they found. Barriers to training included time, a lack of relevant training and disruption from recommissioning. Participants were motivated by career prospects, personal development and by a commitment to improving addiction treatment. Experiences of online learning were based on mandatory training that was largely information based and driven by regulatory compliance. Participants used slow computers with intermittent internet access; many shared computers and desk space. There was a range of digital literacy among participants. High digital literacy was associated with a preference for online learning.

Conclusions: Online learning resources should incorporate elements of personalisation, enabling SMW to select resources according to their needs and preferences. This could be achieved through user navigation or through formative training needs assessments. Online learning resources should focus on advanced therapeutic subjects. They should be overtly information-based but contain elements of administrative and skills-based training. Online learning should acknowledge the impact of recommissioning and should cover managing stress and burn out. Training in therapeutic relationship skills and reflective practice would meet an identified training need. Training that meets regulatory requirements and that can be audited by managers is likely to be supported by provider organisations.

SMW should be able to complete online learning in small sections whilst saving progress. Resources should be tested on old and slow computers. Online learning that includes resources for SMW to share with colleagues, and to deliver directly to service users, would aid dissemination. Online learning should emphasise the benefits of using evidence-based practice on treatment outcomes to address ambivalent perceptions about the importance of doing so. If online learning resources for SMW are to be optimised, perceptions about the characteristics, knowledge, skills and tasks that contribute most to service user outcomes must be addressed.

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5 Abbreviations and definitions

ACMD = Advisory Council on the Misuse of Drugs

BCT = Behavioural Couples Therapy

CBT = Cognitive Behavioural Therapy

CM = Contingency Management

CQC = Care Quality Commission

DANOS = Drug and Alcohol National Occupational Standards

DOI = Diffusion of Innovation

EBP = Evidence-based practice

IC = Iterative Categorisation

ITEP = International Treatment Effectiveness Protocol

KSH = Key Stakeholder(s)

Services = Addiction treatment services (Also referred to as 'projects' in qualitative interview data)

Service users = Addiction treatment services users (often referred to as 'clients' in qualitative interview data)

LCA = Latent class analysis

MI = Motivational Interviewing

NDTMS = National Drug Treatment Monitoring System

NHS = National Health Service

NICE = National Institute for Health and Care Excellence

NTA = National Treatment Agency

NVQ = National Vocational Qualification

ONS = Office for National Statistics

PHE = Public Health England

RCGP = Royal College of General Practitioners

SD = Standard Deviation

SMW = Substance misuse worker(s)

TAM = Technology Acceptance Model

TUPE = Transfer of Employment (Protection of Earnings)

UCD = User-Centred Design

6 Introduction

An addictions researcher is not necessarily best placed to research how to optimise online learning resources. This work would be more effectively achieved by an instructional designer for whom the design of online learning resources is a speciality and research topic in its own right (Gagne and Briggs, 1974). The present study, however, focuses on just one principle of internet design; end-user research. This involves producing a detailed analysis of the characteristics and behaviours of people who will use an online resource. The analysis is then used to design online resources that are optimised for that specific 'end-user' (Cooper et al., 2014). Principles of end-user research are already present in healthcare settings, where patient and participant involvement has been used to improve the effectiveness and relevance of healthcare research (Brett et al., 2014).

Addiction treatments should of course be designed for addiction treatment service users (Neale, 1998), yet substance misuse workers are the people who will deliver those treatments and use the treatment manuals and clinical guidelines that describe them. Substance misuse workers are the end-users of training, of treatment manuals and of information about treatment related research and evidence-based practice. It is perhaps optimistic to expect evidence-based treatments to be delivered with accuracy, when so little is known about those who would deliver them.

This study conducts formative, end-user research to identify the characteristics of third-sector substance-misuse workers for use in designing optimised online learning resources. It seeks to understand substance misuse workers' perspectives of training and evidence-based practice as well as the value they place on online resources. One strength of this approach is that it does not present an intervention for the appraisal of substance misuse workers. If does not ask them why they have, or have not, adopted treatments, nor why research or evidence-based practice has not been diffused. It seeks to identify what substance misuse workers need, how they need it, how they might use it and what researchers might do to help.

It is an important principle of end-user research is that researchers do not pre-suppose an answer on which they seek clarification; such an approach risks, for example, asking end-users what colour the text should be on an otherwise irrelevant resource. Rather, research is conducted to identify end-users' needs before designing resources to meet those needs (Holzinger et al., 2009, Rosson et al., 2008, Stone, 2011). Even to limit the scope of the present study to online resources presumes that such resources would be valued by substance misuse workers. The present study focuses on online learning resources because the internet has the potential to enable direct communication between research,

policy and practice in a way that is flexible, cost-effective and attractive to substance misuse workers. Although the online setting provides a focus for research, it is important not to limit the study to online courses or modules, but to retain the possibilities of the large range and types of online learning that might be accessed by substance misuse workers (Cooper et al., 2014).

A second introductory note regards the setting of the present study. Addiction treatment in England is often provided by third-sector organisations who also deliver addiction treatment in Scotland, Wales and Northern Ireland. The SMW working for these organisations are the subject of this research, so for this, and for practical reasons, participants in the present study were substance misuse workers who worked for third-sector organisations delivering addiction treatment in England, even if those people worked in Scotland, Wales or Northern Ireland. The policies, funding decisions, organisations, service users and staff are comparable; and online learning resources are not limited by national or local boundaries.

To realise the potential of online learning resources to improve addiction treatment delivery, those resources need to be of high quality. Not high quality as determined by web-designers, educators, organisations, regulators or researchers, but high quality as determined by substance misuse workers themselves. How do we know what substance misuse workers would consider to be high-quality online learning resources? Well, we ask them.

7 Background

This chapter will summarise and review literature relevant to the optimisation of online learning for substance misuse workers (SMW). The literature presented here was used to develop the aims, objectives and methods used in this study and includes empirical studies of diffusion and education in healthcare and addiction treatment as well as relevant theoretical perspectives.

The chapter will first summarise the literature on best practice in addiction treatment provision suggesting that addiction treatment is effective in reducing harms and drug use but is often suboptimal in its provision. The difficulty of transferring evidence-based, and optimised treatments into routine practice is referred to as a problem of innovation diffusion. The literature identifies barriers to diffusion that prevent some effective treatments from being routinely provided, and others from being delivered according to best practice. These barriers will be summarised where they are relevant to English addiction treatment provision. This chapter will also summarise the evidence on both face-to-face and online learning resources that have been provided for SMW. It will explore the potential benefits of online learning, as well as identifying gaps in the research literature. The chapter will summarise six systematic reviews and meta-analyses on online learning in healthcare, addiction and behavioural health settings.

The chapter will then review models and theories that are relevant to the design of high-quality online learning resources. These include User-Centred Design (UCD), the Technology Acceptance Model (TAM), Diffusion of Innovation (DOI), and pedagogic learning theories. Finally, the chapter will review studies of UK SMW (the scope broadened to the UK in this case to increase the available literature) to identify the evidence base concerning the characteristics, learning needs and learning preferences of SMW on which the present study can build.

7.1 Addiction treatment provision in England

Drug and alcohol addiction are global concerns. An estimated 255 million people used drugs in 2015 and 29.5 million have a drug use disorder (United Nations Office on Drugs and Crime (UNODC), 2017). In 2017 in the UK there were 3,756 deaths from drug poisoning, with many more associated harms and costs to drug users and to society. These harms include physical, and mental health disorders, unemployment, homelessness, family breakdown and criminal activity (Public Health England, 2017b). In the UK in 2014, it was estimated that nearly 600,000 people were in need of specialist assessment

and treatment for alcohol use disorders (Pryce et al., 2017), and just over 300,000 people were opiate and / or crack users (Hay et al., 2017). Addiction-related harms can incur considerable social and financial costs, the cost of addiction in the UK to family and carers alone has been estimated to be £2 billion every year (Copello et al., 2009). The types of harm caused by alcohol and drugs vary. In 2010 Nutt and colleagues categorised common drugs of abuse according to 16 distinct types of harms including physical, psychological and social harms, each of which could be associated with drug users themselves or with other people (Nutt et al., 2010). They found considerable harm to drug users themselves from heroin, crack cocaine and metamfetamine, and considerable harm to others from alcohol, heroin and crack cocaine.

Addiction treatment services in England offer support as well as medical, recovery and psychosocial interventions to reduce addiction and its associated harms (Department of Health (England) and the devolved administrations, 2017). It has been estimated that for every £1 spent on addiction treatment, £2.50 is saved in associated costs (Public Health England, 2017b, Godfrey et al., 2004). The association between attendance at addiction treatment services and reductions in drug use, crime and risk of overdose is well established (Eastwood et al., 2017). The combination of medical treatment with adjunctive psychosocial interventions has demonstrated effectiveness in reducing drug and alcohol use as well as reducing the harms associated with addiction (Eastwood et al., 2017).

Addiction treatment service provision in England is monitored by the National Drug Treatment Monitoring System (NDTMS). The NDTMS routinely collects data on the types of therapeutic interventions provided to addiction treatment service users. These are categorised into prescribing, recovery and psychosocial interventions (Public Health England, 2018). These three types of intervention were used by the present study to identify subgroups of SMW and to explore their working contexts relevant to Objective 2.

Third-sector (or voluntary sector) organisations are so called because they are neither public bodies nor private commercial businesses. Their origins are in small community groups that were based on philanthropic principles (Hedley et al., 1995), and they have provided support to vulnerable people within the UK welfare system since its inception. Their role in public health provision changed in the 1990s when health services were increasingly contracted outside of public bodies in order to encourage efficiency and choice through competition (Macmillan, 2010, Dickinson et al., 2012). Third-sector provision in the UK expanded in 1998 when the UK drug strategy ‘Tackling Drugs to Build a Better Britain’ (HM Government, 1998) initiated a period of investment intended to improve the quality and capacity of addiction treatment services (National Audit Office, 2010, HM Government, 1998). In 2001 the National Treatment Agency (NTA) was formed to oversee addiction treatment provision during this

expansion. Addiction treatment services were, at that point, commissioned by local Drug and Alcohol Action Teams, with funding derived from 'ring-fenced' budgets that would guarantee funding for addiction treatment regardless of other local health priorities (Advisory Council on the Misuse of Drugs (ACMD), 2017).

In 2011 investment in addiction treatment began to plateau (Advisory Council on the Misuse of Drugs (ACMD), 2017) and in 2013 addiction treatment budgets ceased to be ring-fenced. This change meant that funding was no longer set by central government and was allocated from local authority public health grants, from which a range of other local health priorities also had to be funded. The NTA was dissolved and responsibility for the oversight of addiction treatment services was transferred to Public Health England (PHE). The role of PHE is characterised by support and advice and is different from the more involved 'delivery assurance' capacity of the NTA (Advisory Council on the Misuse of Drugs (ACMD), 2017). From 2010, UK government funding was reduced across all budgets (HM Treasury, 2010). The combination of reduced local government funds, and the loss of ring-fenced budgets for addiction treatment resulted in substantial reductions in funding for addiction treatment services (Recovery Partnership and Adfam, 2017b, Buck, 2016, Public Health England, 2014j). As funding continued to reduce through the 2010s, many services that were previously provided by the National Health Service (NHS) were transferred to third-sector providers (Advisory Council on the Misuse of Drugs (ACMD), 2017). The low-cost nature of third-sector services, along with their use of non-professional staff, volunteer workers and recovery champions (Recovery Partnership and Adfam, 2017a) contributed to their preference among commissioners working with reduced budgets (Dickinson et al., 2012).

The changes to local addiction treatment provision necessitated by reduced budgets are often achieved through a competitive tendering process commonly referred to as recommissioning (National Treatment Agency, 2010). This involves addiction treatment provider organisations submitting contract applications that describe how they would provide local addiction treatment services to meet a pre-determined set of specifications as well as how much such provision would cost. This recommissioning process has been criticised as disruptive, costly and complex (Advisory Council on the Misuse of Drugs (ACMD), 2017, Macmillan, 2010). Staff that work in addiction treatment services that have been recommissioned are often transferred to new employers under Transfer of Undertakings – Protection Employment Regulations (TUPE) (HM Government, 1981). This process has been described as difficult for staff who have to adapt to changes of working culture, changes in staffing levels and new employers (Advisory Council on the Misuse of Drugs (ACMD), 2017).

One of the most prominent initiatives to professionalise the workforce in England was the development of a set of National Occupational Standards for Drug and Alcohol workers (DANOS) (Skills for Health, 2008, Federation of Drug and Alcohol Practitioners, 2018). DANOS were first developed by Skills for Health in 2002 and specified a range of activities that were relevant to the delivery of addiction treatment, along with the skills and knowledge required for SMW to deliver those activities to a high standard. The purpose was to help commissioners and provider organisations to define roles within addiction treatment services, to allow SMW to know what skills were required, and to enable training to be designed to meet those skills needs. In 2008 the role of DANOS changed from being a commissioning and training framework to being used for treatment delivery guidance (Ashwood and Rowley, 2016). They are not mandatory and are also no longer available on the skills for health website (DANOS, 2014). There are no studies that summarise the effectiveness or current use of DANOS in either treatment delivery or training settings.

It is because of the increasing use of third-sector organisations to provide addiction treatment, combined with the understudied and non-professional nature of their workforce that the present study will focus on third-sector addiction SMW. In addition, further anticipated (Nuffield Trust, 2016) funding reductions are likely to have a continued impact on the quality of addiction treatment service provision (Recovery Partnership and Adfam, 2017b). Therefore, research into effective and cost-effective ways to improve service delivery within challenging budgets and complex working systems is both important and timely.

7.2 Innovation diffusion in healthcare and addiction settings

The process of transferring knowledge from research to practitioners is known as dissemination. The process of changing behaviour, so that new knowledge informs routine practice is known as diffusion (Rogers, 2003). It is these two targets, disseminating knowledge and diffusing best practice that highlight the opportunities of online learning. To be successful, online learning resources must improve the knowledge of SMW as well as their ability to deliver best practice interventions. There are a range of ways in which online learning resources can achieve these goals, and these are discussed in detail below. However, the design and maintenance of online resources costs time, effort and money (Bartley and Golek, 2004, Jung and Rha, 2000, Hollands and Tirthali, 2014). It is therefore important to assess whether such costs are justified, by examining the current need for improved dissemination and diffusion of innovation in English addiction treatment services. If SMW already deliver optimised treatments according to the best available evidence, there is little need for even the most effective online learning resources. That the internet offers solutions to innumerable problems, does not confer

that those problems exist or that they are sufficient to merit investment and research. The present study will now summarise evidence on dissemination and diffusion in healthcare, and in addiction treatment settings. This summary of the literature will help to identify the problems that online resources might address.

7.2.1 Dissemination and diffusion in healthcare

In 2008 Buxton and colleagues estimated that the average time-lag between research expenditure and adoption of clinical guidelines in cardiovascular disease was 12.5 years (Health Economics Research Group et al., 2008). It is, however, important to note that not all delays to implementation are undesirable. Researchers have voiced caution at the idea of rushing dissemination and diffusion processes (Ostergren et al., 2014). Medical innovations (particularly medicines) must be rigorously tested for safety and evidence of efficacy (Drug and Therapeutics Bulletin, 2009, National Institute for Health and Care Excellence (NICE), 2013). The world in which innovation is implemented the moment a researcher publishes, is the world in which the flaws in promising ideas are discovered too late to prevent unexpected harms.

Barriers to dissemination and diffusion cannot be solved simply through increased communication; many challenges arise from the multiplicity, rather than the lack, of research that is available to inform healthcare provision (Hall and Walton, 2004). There are continual advances in the evidence on which treatment provision can be based. For 2016 alone, Medline (a database for biomedical literature) listed 5,623 journals and 869,666 citations on its database (U.S. National Library of Medicine, 2016). The tasks of screening, assessing quality and summarising the many, often contradictory, research findings are complex, with organisations of highly-skilled specialists dedicated to these tasks (National Institute for Health and Care Excellence (NICE), 2018, Cochrane, 2018). These challenges are compounded when the settings in which those treatments are to be implemented are also complex. Medical Research Council guidance on evaluating complex interventions suggests that social, political and geographical contexts must be understood for the diffusion of interventions to be successful, particularly when multiple interventions are to be delivered concurrently in challenging geographical and social settings (Craig et al., 2008).

There is considerable variation in the length and nature of diffusion delays, with estimates of the average delay in healthcare diffusion ranging from 6 to 17 years (Morris et al., 2011, Balas and Boren, 2000). There are also difficulties in measuring delays, with uncertainty about whether implementation starts at first publication of evidence, first systematic review or first inclusion in national guidelines. Estimating the point at which an innovation has finally ‘diffused’ is also problematic and prone to error.

Despite these challenges, information on the exact nature of delays is essential if strategies to address them are to succeed (Grimshaw et al., 2004, Grimshaw and Eccles, 2004). Grimshaw and colleagues noted that causes of, and solutions to, diffusion problems can vary with the specific contexts of each situation (Grimshaw and Eccles, 2004). Therefore, whilst it is useful to note the existence of broad issues relating to diffusion in medical healthcare, this chapter will now focus on the specific issues affecting diffusion in addiction treatment provision.

7.2.2 Dissemination and diffusion in addiction treatment settings

In 2009, Garner conducted a systematic review of diffusion in addiction treatment settings. His review concluded that, despite many studies of diffusion in addiction treatment, there was a continued need for further investigation and study (Garner, 2009). Garner reported that staff attitudes could influence diffusion of evidence-based practice (EBP) noting that barriers to diffusion differed between treatments, most notably that attitudes towards psychosocial interventions were more positive than those towards medical treatments. His review suggested that attitudes restricting diffusion were often based on a lack of information and that those attitudes could be changed through effective training. He also reported that clinicians viewed manualised therapies favourably and valued their structure and consistency. Conversely, many clinicians were concerned that working from manuals reduced their ability to respond to service users' needs.

Researching diffusion of therapeutic interventions can be difficult when there are problems determining exactly what happens in therapeutic sessions. Some research has indicated that low levels of EBP are delivered despite counsellors' beliefs to the contrary (Carroll, 2012, Miller, 2007). There are similar findings from the UK, where Best and colleagues reported that just 11 minutes of key-working sessions were taken up with evidence-based interventions (Best et al., 2009). This kind of partial, suboptimal and low fidelity provision of treatment indicates incomplete diffusion of EBP as well as highlighting challenges that are faced by diffusion research.

In the UK, the National Institute for Heath and Care Excellence (NICE) guidelines on psychosocial interventions for drug misuse (National Institute for Health and Care Excellence (NICE), 2007b) suggest that Contingency Management (CM - a system of rewards contingent on positive behaviour such as negative drug tests) should be offered in addiction treatment (National Institute for Health and Care Excellence (NICE), 2007b, Pilling et al., 2009). Despite this recommendation, there is little evidence that CM is routinely delivered in either UK or US settings (Advisory Council on the Misuse of Drugs (ACMD), 2015, Sinclair et al., 2011, Rash et al., 2017). Similarly, naloxone, which can prevent deaths from opiate overdose, is not routinely provided to injecting opiate users in the UK (Black et al., 2017) despite well-

established evidence of effectiveness (McDonald and Strang, 2016, Strang et al., 1999, Strang et al., 1996). In the case of naloxone, poor diffusion contributes to continued, yet preventable, deaths from overdose.

One finding from Strang and colleagues' Randomised Injectable Opiate Treatment Trial (RIOTT) was that optimised methadone provided in a clinical trial, was more effective than methadone provided in community settings (Strang et al., 2010), suggesting that routine methadone provision was sub-optimal. Further evidence of suboptimal methadone prescribing was presented in an Advisory Council on the Misuse of Drugs (ACMD) review (Advisory Council on the Misuse of Drugs (ACMD), 2015). This review indicated that low levels of staff knowledge and skills contributed to suboptimal methadone delivery. Opioid substitution treatment (OST) is central to the treatment of many people seeking help for heroin addiction (National Institute for Health and Care Excellence (NICE), 2007a), and its poor diffusion contributes towards suboptimal outcomes for addiction treatment service users.

These examples indicate that medical and psychosocial interventions for addiction are subject to poor diffusion and that they can be caused by low staff skills, resistant attitudes and wider structural factors. Improved diffusion of best practice in addiction treatment has the potential to reduce harms and mortality in service users. It is important to use evidence of effectiveness to improve addiction treatment, and it is important to improve treatment for people seeking help with addiction. If strategies to address these diffusion problems are to be successful, they must be based on an understanding of specific moderators.

7.2.3 Barriers and facilitators to diffusion in addiction treatment

There is a small body of literature that details barriers, facilitators and mediators to diffusion in UK addiction treatment settings, with more studies from the US and from Australia. This international literature indicates that there are four themes that affect diffusion in addiction treatment: staff issues, organisational issues (including funding), training, and the characteristics of the innovation. Other, less well documented barriers are described here where they provide relevant detail. There is no certainty that all these barriers to diffusion are transferrable to SMW working for third-sector addiction treatment providers in England, nor that they relate to online learning resources. The present study sought to address this uncertainty by identifying the barriers and facilitators to training for third-sector SMW, thus forming Objective 6 in the present study (see Table 4).

It is interesting to note that these themes of diffusion broadly follow the areas highlighted in Rogers' DOI, which states that diffusion occurs in social settings and over time, and that that process is

influenced by people, organisations, communication channels and innovation characteristics (Rogers, 2003). Rogers's theory is discussed in more detail later in this chapter (see section 7.6.3) where its influence on the present study is also described.

7.2.3.1 Staff-based barriers

The most commonly reported barrier to diffusion in addiction treatment is that SMW are opposed to implementing interventions that do not align with their own views or beliefs. This is perhaps best illustrated in CM studies, where SMW have objected to giving service users financial incentives (Ducharme et al., 2010). Some have objected to the paternalistic nature of CM, saying that it limits free choice (Sinclair et al., 2011). The personal addiction treatment experiences of some SMW can also influence their adoption of new treatments. In one study SMW who followed 12-step principles were reluctant to endorse opiate substitution therapy (McGovern et al., 2004) citing conflicts between the principles of that treatment and their beliefs about recovery. In another study, SMW were reluctant to endorse CM because the philosophy was at odds with their 12-step principles (Aletraris et al., 2015). A further example of ideological opposition was of SMW who smoked, being reluctant to provide smoking cessation services to service users (Bobo et al., 1995, Guydish et al., 2007).

In addition to the ideological stance of SMW, their educational characteristics can also affect diffusion. SMW with higher levels of education and longer experience working in addiction have been identified as less resistant to implementation of EBPs than SMW with lower levels of education or experience (Aletraris et al., 2015, Lundgren et al., 2011b, Rash et al., 2012). The impact that education and experience can have on and attitudes towards EBP influenced the decision to identify the demographic and educational characteristics of participants as well as the working contexts of SMW in the present study, forming Objective 1 and Objective 2. Data relating to participants' education and experience were used to analyse differences in training needs and preferences.

A lack of time is another often cited barrier to diffusion. In the UK, Sondhi and colleagues identified a lack of available staff time as a barrier to implementing training in Neuro-Linguistic Programming (Sondhi and Day, 2014). A training needs analysis in Scotland found that services were unable to 'afford' to release staff to attend training (Smith, 2011). Some studies have suggested that the lack of time for training has been caused by the demands of excessive administrative tasks and increasingly large caseloads (Campbell et al., 2003, Tuchman and Sarasohn, 2011, Varra et al., 2008, Bartholomew et al., 2007, Willenbring et al., 2004, Best et al., 2009). Other, more generalised staff factors such as disinterest, stress or simply unexplained 'resistance' were also present in the literature (Allsop and

Helfgott, 2002, Condon et al., 2008, Hartzler et al., 2012, Rash et al., 2012, Sondhi et al., 2016, Varra et al., 2008, Amodeo et al., 2011, Willenbring et al., 2004, Lundgren et al., 2012).

7.2.3.2 Funding and organisational barriers

It is unsurprising that the cost of an innovation can preclude implementation. Implementation costs can accumulate through changes to policy and practice, increased administrative procedures, purchase of manuals and equipment and through training provision. If an organisation cannot afford the costs associated with providing or implementing a new treatment, then those costs act as a barrier to diffusion (Duchanne et al., 2007, Carroll, 2014, Bartholomew et al., 2007). This barrier has heightened relevance for interventions such as CM which can, by their nature, be costly to deliver (Hartzler et al., 2012). Allsop and Helfgott in Australia found that addiction treatment providers preferred cheap interventions over expensive ones, because minimising costs helped them to be competitive when applying for treatment contracts (Allsop and Helfgott, 2002). Park and colleagues found that addiction treatment providers often have to select between a range of EBPs for implementation and are unable to implement multiple EBPs simultaneously; noting that these selections are often determined by cost (Park et al., 2018).

Other organisational resources can affect diffusion in addiction treatment services. Several studies have found that organisations lacking technological resources such as computers have more barriers to implementation than organisations with good technical resources (Hartzler et al., 2012, Lundgren et al., 2012, Varra et al., 2008, Lundgren et al., 2011b). One study found that a lack of administrative support could also act as a barrier to implementation (Willenbring et al., 2004). Several studies have identified high staff turnover within organisations as a barrier to implementation (Condon et al., 2008, Amodeo et al., 2011) suggesting that stability and experience of an organisation's workforce can have an impact on treatment provision. One US study found high staff turnover was associated with non-completion of training which then prevented diffusion (Squires et al., 2008). Much has been published on the characteristics of effective addiction treatment organisations (Roche and Nicholas, 2016, Skinner et al., 2009). It is important to note that simply adding funding is rarely sufficient to improve delivery of EBP, and that organisational characteristics such as positive attitudes, structural support and organisational backing must also be present (Baker and Roche, 2002, Rogers, 2003).

There are many ways in which wider structural factors can affect diffusion. A qualitative study of addiction treatment provision in England by Sheridan and colleagues (Sheridan et al., 2011) reported that limits on funding for addiction treatment, competition between providers, and complex local organisational systems could all act as barriers to diffusion. Furthermore, that these factors could

contribute to workforce stress. Many organisational factors are influenced, and in some cases determined, by external agencies, particularly funding which is determined by local commissioning authorities and not by the organisations themselves (National Treatment Agency, 2008, National Treatment Agency, 2010, Public Health England, 2014j). Policy, regulations, competition, local need and local commissioning structures can all influence addiction treatment provider organisations.

Senior management teams within addiction treatment provider organisations can also be prone to ideological objections to healthcare treatments (Condon et al., 2008, Bartholomew et al., 2007). The importance that organisational leaders place on EBP and its implementation can also influence diffusion (Glasner-Edwards and Rawson, 2010, Hartzler et al., 2012). This issue was illustrated in a study of naloxone in a UK prison where a lack of senior management input was identified as a barrier to naloxone distribution (Sondhi et al., 2016). In this case senior managers did not object to, or block implementation, but their lack of support was sufficient to block progress through omission rather than opposition. Lundgren and colleagues found that directors with a higher level of education were more likely to use EBP than directors with lower levels of education suggesting that the characteristics of leaders can alter diffusion of EBP (Lundgren et al., 2011a).

The influence of organisations on addiction treatment training and delivery is not the primary focus of this thesis, but their influence appears to be so pronounced that to omit their perspectives would undermine the strength of the present study. Therefore, KSH perspectives were included in several objectives.

7.2.3.3 Training barriers

Training can be effective in changing clinician behaviour, but there are several factors to consider when assessing the impact of training initiatives. A systematic review of addiction treatment training by Walters and colleagues found that insufficiently trained SMW were less able and less willing to implement EBP than staff who had received sufficient training (Walters et al., 2005, Lundgren et al., 2011b). A lack of training, a lack of good quality training, and poor access to training have been repeatedly identified as barriers to implementation of EBP (Tuchman and Sarasohn, 2011, Sheridan et al., 2011, Amodeo et al., 2011, Bartholomew et al., 2007, Willenbring et al., 2004, D'Ippolito et al., 2015). Alongside formal training, studies have reported that SMW learn about best practice through exchanging information with their colleagues (Bride et al., 2010). Duchanne and colleagues noted that simply working with clinicians who prescribed buprenorphine was effective for improving implementation of buprenorphine (Duchanne et al., 2007), suggesting that SMW can learn through shadowing and observation as well as through formal training.

The need to identify the current training experiences of SMW is present throughout the literature and in the theoretical models (described in section 7.6 below). The impact that a lack of training can have on diffusion as well as the variety of learning methods used by SMW contributed to forming Objective 3 in the present study, that seeks to identify the range and nature of current training for SMW.

7.2.3.4 Innovation-based barriers

Barriers to diffusion can differ according to the characteristics of an intervention. CM is prone to funding barriers that less expensive interventions are not (Hartzler et al., 2014). Philosophical objections were often focused on Cognitive Behavioural Therapy (CBT) and CM (Sinclair et al., 2011, McGovern et al., 2004). Lundgren and colleagues' cross-sectional study in the US found that there was less resistance to Motivational Interviewing (MI) than there was for other interventions such as CBT or Assertive Community Treatment (Lundgren et al., 2012). Carroll and colleagues suggested that CBT was too complex to implement in a simple manner and that diffusion would require organisational change in addition to training (Carroll, 2014). Amodeo and colleagues identified a lack of training as the biggest barrier to implementation of MI, client resistance the biggest barrier to CBT, and funding the biggest barrier to Acceptance and Commitment Therapy (Amodeo et al., 2011). A US review by Carroll described some of the reasons why CBT in particular had not been widely implemented in addiction treatment, including staff ideologies, high cost, poor training and a lack of supervision (Carroll, 2014).

In Belgium, Autrique and colleagues identified that staff could be resistant to delivering EBP interventions because those interventions were perceived to be inflexible and to reduce the ability of SMW to respond to service users' needs (Autrique et al., 2009, Rieckmann et al., 2011a). The issue of flexibility is recurrent in the literature on implementation. Weingardt refers to this issue in his review of instructional design (Weingardt, 2004) describing the conflict between the needs of researchers and practitioners. He posits that researchers require specific and measurable interventions delivered with fidelity so that outcomes can be attributed to the intervention alone. These needs contrast with those of SMW who require flexible interventions that can be delivered according to service users' needs and contexts. Accordingly, manualised therapies are inflexible because of the needs of researchers, yet provided to staff who need to deliver interventions flexibly. These experiences have informed the design of the present study, where the characteristics of research and EBP resources used by SMW are rarely reported. Objective 8 therefore sought to identify how SMW found and used such resources.

7.2.3.5 Other barriers to innovation diffusion

There was a range of other barriers to diffusion identified in the literature. The use of 'unclear language and / or jargon' in research reports was seen a barrier for some staff (Campbell et al., 2003). Differences in the conceptualisation of significant clinical effects between practitioners and researchers was a barrier for others; with researchers' understanding of significance based on statistical measures over large populations, and clinicians' understanding of significance based on observable change in individual service users (Miller and Manuel, 2008). A distrust of US government involvement in mandating EBP was identified as a barrier to implementation and was based on scepticism among practitioners who viewed legislators as ill-informed and motivated solely by reductions in cost (Rieckmann et al., 2011a).

To address these numerous barriers to diffusion, Roche and colleagues advocated a systems-wide approach to workforce development that addressed barriers at multiple levels. These levels included working conditions, strategy, organisations, knowledge and training (Roche and Nicholas, 2016). They commented that research identifying how to engender system-wide change would contribute to improved diffusion of EBP (Roche and Nicholas, 2016, Baker and Roche, 2002, Roche et al., 2009). Although this thesis focuses on SMW experiences, and on training as the primary method for dissemination and diffusion (Walters et al., 2005), the research design sought to understand issues relating to SMW experiences and staff training within the context of those wider systems.

7.3 Staff training

Training for medical health workers is designed to improve quality and capacity in treatment provision (Mackinnon Partnership, 2010, Welsh Assembly Government, 2005, Convention of Scottish Local Authorities and The Scottish Government, 2010, Advisory Council on the Misuse of Drugs (ACMD), 2015, National Treatment Agency, 2006, Intergovernmental Committee on Drugs, 2014). In contrast to education, training is more focused on work related skills and knowledge and can take a variety of forms (Henggeler et al., 2013, Uchtenhagen et al., 2008). The focus of this thesis is on training that occurs primarily on the internet (Cook et al., 2008), however a summary of face-to-face training will provide some context before focusing on online methods. Much research into online training compares its effectiveness, strengths and limitations to face-to-face training. A summary of the research on face-to-face training will therefore aid interpretation of the research on online learning.

Systematic reviews of training in healthcare settings have concluded that training can change staff knowledge, skills and attitudes. (Cook et al., 2008, Jones et al., 2015, Walters et al., 2005). These conclusions have qualifiers that increases can be modest, short-lived and do not necessarily result in improved clinical practice. Cook and colleagues published a meta-analysis comparing online, face-to-face

training and no training (Cook et al., 2008). They reported that the outcomes on knowledge, learner behaviours and patient effects were significantly better for those attending face-to-face training than for those receiving no training. The most recent systematic review of workshop-based training in addiction treatment was conducted by Walters and colleagues in 2005. They reviewed 17 studies of training for psychosocial addiction treatments including Brief Interventions, CBT, MI and Network Therapy. They found that attitudes and skills were routinely improved following training, with many participants reporting that they were able to deliver target interventions following training. The review was limited by the high use of self-report measures and paucity of validated tools (Walters et al., 2005). Since Walters and colleagues' review, several longitudinal studies with control groups also reported improved attitudes towards EBPs following training (Hartzler et al., 2014, Henggeler et al., 2013, Rash et al., 2013, Strang et al., 2007). Haug and colleagues also found that SMW with addiction certification had more positive attitudes towards EBP than SMW without an addiction certification (Haug et al., 2008).

Walters finding that improvements from training could be modest was also found by Strang and colleagues when providing addiction training to GPs (Strang et al., 2007). As well as modest gains, some studies have reported inconsistent gains among learners. Sondhi and Day found that just half of participants attending training thought that training had had an impact on their counselling skills (Sondhi and Day, 2014). Some studies found that training was less effective when the subject being taught contradicted learners' existing philosophies or motivations, reflecting the barriers to diffusion described above (Mitcheson et al., 2009, Bartholomew et al., 2007, Sondhi and Day, 2014, Hartzler et al., 2014). D'Ippolito and colleagues noted that if training was too demanding it could be ineffective (D'Ippolito et al., 2015).

Walters and colleagues review also found that improvements in skills and knowledge could diminish over time and that supplementary training through supervision or follow-up sessions, might address these diminishing outcomes (Walters et al., 2005). Later studies also reported diminishing returns from training over time with levels of skills and knowledge returning to baseline at follow-up (Henggeler et al., 2008, Moyers et al., 2008). Ford and colleagues, and Carrol and colleagues emphasised the importance of ongoing supervision to maintain knowledge levels and to ensure fidelity of delivery (Ford et al., 2009, Carroll et al., 2010).

An important limitation to studies of training is that improvements in patient care are rarely measured or reported (Walters et al., 2005). Walters and colleagues found just five studies that measured patient outcomes, four of which reported significant, but small, effects indicating that staff training could be effective at improving treatment outcomes. Other studies have found no, or non-significant changes for service user outcomes following staff training and have noted that changes in treatment delivery can be

difficult to attribute solely to training, reflecting the complex settings in which treatment is delivered (Graham et al., 2006, Butler et al., 2013). One study by Hartzler and colleagues did find significant improvements for service user outcomes following CM training (Hartzler et al., 2014). However, despite service user outcomes being the primary focus of staff training, there remain few studies that measure and report those outcomes (Beidas and Kendall, 2010, Jones et al., 2015).

A commonly reported limitation to training is that training alone cannot ensure clinical change, with change only realised when other systemic and organisational factors are addressed (Beidas and Kendall, 2010, Sinclair et al., 2011, Ducharme et al., 2010, Skinner et al., 2009). As well as organisational support, SMW often need time to prepare and integrate learning from training into their practice, and when such time is not available training is less effective as a tool for diffusion (Bartholomew et al., 2007, Sondhi and Day, 2014). Several studies have further reported that low levels of training provision have limited its effectiveness (D'Ippolito et al., 2015, Amodeo et al., 2011). Issues of quality were raised by Walters and colleagues (Walters et al., 2005, Sheridan et al., 2011), who suggested that outcomes from training were likely to be poor when the quantity and quality of that training were also poor. A multi-national survey (that did not include the UK) found that addiction treatment training was often unsystematic, unregulated and insufficiently supported (Uchtenhagen et al., 2008). Thus, if staff have insufficient, low quality training and little organisational support for implementation, clinical outcomes remain unlikely to change.

It is important here to acknowledge the impact that training can have on less commonly studied outcomes. Leykin and colleagues found that training could help decrease 'burn out' among staff (Leykin et al., 2011). Varra and colleagues reported that training in Acceptance and Commitment Therapy reduced barriers to other prescribing interventions (Varra et al., 2008). Similarly, several studies found that higher levels of education and training were related to a more positive attitude towards all EBPs (Campbell et al., 2013, Haug et al., 2008, Lundgren et al., 2011b, Rieckmann et al., 2011b). These studies imply that whilst training can reduce specific barriers to, for example, CM delivery, a more general education or training programme can work to reduce barriers to delivery of all EBPs.

The literature suggests that training can be an effective tool for improving the knowledge and skills of SMW, as well as delivery of addiction treatment. In order to ensure delivery of optimised treatments, staff training must be of high quality, yet the quality of face-to-face training seems to be variable. One of the potential benefits of online learning resources is the ability to measure, control and regulate the quality of those resources. Online learning resources can be exactly replicated for repeated use with minimal variation in quality, and there is good evidence that online training can be as effective as face-to-face training (Cook et al., 2008).

7.4 Online training

Online learning, (also called e-learning and web-based education) has developed over the last 40 years with developers seizing on the opportunities of new technologies as they arise. The characteristics of online learning can vary across education, business, industry and healthcare sectors, with some typified by informal, short and specific courses, and others typified by longer and more in-depth modules (Nicholson, 2007, Campbell, 2004). In Cook and colleagues' meta-analysis of internet learning in the health professions, they defined online learning as learning that takes place primarily on the internet, defining online learning by its online location rather than by any other characteristics, a definition that will be used in the present study. The implication of this broad definition is that not all online learning occurs in formal and structured modules. Information is sought online in many ways, and people learn through apps, blogs, news outlets and online forums (Klerings et al., 2015). Formal training is easier to study because the effectiveness of discrete modules can be isolated for research studies, but online learning can, and does, have many forms.

One such form of online learning is 'just in time' learning, which refers to online resources that are accessed when required by the learner. This form of learning has been studied in clinical settings where medical students use tablets or Smartphones to supplement their learning when in lectures or in clinical settings. Whilst showing promise in these settings, this form of learning has yet to be studied in depth (Byrne-Davis et al., 2015). Some suggest that just-in-time learning could optimise clinical practice by enabling clinicians to access timely and up-to-date information. Others express concern that searching online resources can distract medical staff from direct patient interaction and observation (Scott et al., 2017b).

7.4.1 Online learning reviews

There were seven systematic reviews and meta-analyses identified that specifically address the efficacy of online learning in healthcare, and these are summarised in Table 1. Just one of these reviews focuses on online learning for addiction treatment workers (Calder et al., 2017). Cook and colleagues' meta-analysis in 2008 remains the most thorough and informative review, and Calder and colleagues' the most relevant to the present study, although all reviews presented here make unique contributions. These reviews and meta-analyses all indicate that online learning can be as effective as face-to-face learning for improving skills, knowledge and behaviour (i.e. treatment delivery) although there is less evidence on the impact of online learning on patient outcomes, and few details about how to ensure its

quality. The reviews consistently report limitations from a lack of replication, a wide range of study designs, a lack of consistent evaluation tools and superficial descriptions of online learning modules.

Table 1: Systematic reviews and meta-analyses of online learning in health professions (n=7)

Study, year, authors	Description and number of included studies	Outcomes	Limitations of the research	Recommendations for research
Cook et al., 2008a *Internet-based learning in the health professions: A meta-analysis*	A meta-analysis of internet-based instruction for health professionals compared to no intervention or to non-internet interventions *n*=201	**Pooled effect size (CI): *(Positive numbers favour online learning)*** **Online learning compared to control.** Knowledge = 1 (0.90 – 1.10) Skills = 0.85 (0.49 – 1.20) Behaviours = 0.82 (0.63 – 1.02) **Online learning compared to non-internet instruction** Knowledge = 0.12 (0.003 – 0.24) Skills = 0.09 (-0.26 – 0.44) Behaviours = 0.51 (-0.24 – 1.25)	Heterogeneity of studies and results Few replicated studies Few commonly-used evaluation tools	There is little merit in continued comparisons of online learning with no intervention Research on effective implementation of online learning Research on the contexts in which online learning is best used Research on how to optimise the quality of online learning
Wong et al., 2010 *Internet-based medical education: a realist review of what works, for whom and in what circumstances*	A realist review of online medical education identifying what works for whom and in what contexts *n*=249	Of all the candidate theories, the Technology Acceptance Model (TAM) was reflected in the data. Participants must perceive online learning as useful and easy to use for it to be effective. Learners valued interaction in online learning. High quality online learning for one set of participants may be ineffective for others due to context, technical access and technical ability	The large heterogeneity of included studies inhibited comparison. Although this was also a strength, providing a wide range of data Lack of training descriptions in publications No expert opinion included in the review	Space should be provided in publications for rich explanations of online learning modules when they are the subject of research
Cook et al., 2013 *Comparative effectiveness of instructional design features in simulation-based education: systematic review and meta-analysis*	A systematic review and meta-analysis of the effectiveness of design features in simulation-based education for health professionals *n*=289	**Pooled effect size (CI): *(Positive numbers favour the instructional design feature)*** **Skills outcomes** Range of difficulty = 0.68 (20 studies; p<0.001), Repetitive practice = 0.68 (7 studies; p=0.06), Distributed practice = 0.66 (6 studies; p=0.03), Interactivity = 0.65 (89 studies; p<.001), Multiple learning strategies = 0.62 (70 studies; p<.001) Individualised learning = 0.52 (59 studies; p<.001) Mastery learning = 0.45 (3 studies; p=0.57), Feedback = 0.44 (80 studies; p<.001), Longer time = 0.34 (23 studies; p=0.005), Clinical variation = 0.20 (16 studies; p=0.24), Group training = 0.22 (8 studies; p=0.09)	The analysis included diverse training subjects, designs and outcome measures Small sample sizes of most studies Studies included poor descriptions of instructional design	Research on the relative costs of design features Research on the mechanism and optimisation of design features
McCutcheon et al., 2014 *A systematic review evaluating*	A systematic review of online learning compared to face-to-face learning in nursing education	**Knowledge,** Knowledge was improved in post-training results. Five studies reported no difference between online and face-to face training. Two studies reported improved outcomes from face-to-face compared to online methods	Weak quality of included studies Incomparable participant groups in studies	Further research on the value of supplementary learning materials. More research needed into the effects of blended learning

Study, year, authors	Description and number of included studies	Outcomes	Limitations of the research	Recommendations for research
the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education	*n*=19	**Clinical Skill** Similar or moderately improved outcomes from online learning compared to face-to-face training, these improvements possibly attributed to the ability to repeat modules	Outcomes were confounded by provision of supplementary materials The wide variety of interventions made comparisons difficult	
Sinclair et al., 2016 *The effectiveness of Internet-based e-learning on clinician behaviour and patient outcomes: A systematic review*	A systematic review of randomised controlled trials (RCTs) on the effectiveness of online training for clinician behaviour and patient outcomes *n*=7	**Clinician behaviour** Online learning produced equivalent clinical behaviour outcomes to other learning approaches and was superior to no training at all. **Patient outcomes** None of the included studies reported patient outcomes	Large heterogeneity of study design included as well as heterogeneity of intervention (i.e. online module) Few common reporting methods Insufficient detail about the learning module reported in studies	Future research should objectively measure patient outcomes attributed to online learning for clinicians Future research needs to study online learning that is of sound, high quality design, based on design principles and theoretical frameworks. Need to develop reliable and validated measurement tools
Calder et al., 2017 *Online training for substance misuse workers: A systematic review*	A systematic review of studies about online learning for substance misuse workers *n*=16	Outcomes from online learning are routinely better than those from no learning and comparable to those from face-to-face learning. Flexible online learning has the potential to reduce stress and burnout, to be cost-effective and to train SMW in a range of subjects including reflective CBT, CM, and Reflective Listening	A wide range of quality of online education moderated outcomes Poor descriptions of leaning modules prevented comparison and replication of research Few providers demonstrated an understanding of the contexts in which online learning would be used	Research into substance misuse workers on which to base quality measures of online learning
Jackson et al., 2017 *Web-based training methods for behavioral health providers: A systematic review*	A systematic review of web-based training design for behavioural health practitioners *n*=45	Virtual classroom modules were less effective than face-to-face training Serial instruction was associated with positive training outcomes that were similar to face-to-face training Self-directed learning was more effective than written materials Simulation training was related to positive learning outcomes Ongoing support was resulted in mixed outcomes. Some showed no improvements, others showed improved outcomes compared to learners who did not access ongoing support	Heterogeneity of design for included studies Inadequate description of training contained in the included studies	Research to improve study design Studies measuring fidelity of intervention delivery as an outcome Development of reliable and validated tools Studies comparing multiple online courses to assess quality indicators

7.4.1.1 Cook et al., 2008

Cook and colleagues' meta-analyses of online training for health professionals (Cook et al., 2008) included 201 studies that compared online training with no training, and online training with face-to-face training. They found that online training was consistently better than no training. They also found that online training could be as effective as face-to-face training for satisfaction, knowledge, skills, clinician behaviours and patient outcomes. They reported just six studies that measured clinician behaviours or patient outcomes following online training and found that online learning was comparable to face-to-face learning for these outcomes.

Although Cook and colleagues found comparable outcomes between online and face-to-face training, there was a wide variety within included studies. Some studies reported online training to be considerably more effective than face-to-face training, and others reported online training to be considerably less effective than face-to-face training. Cook and colleagues recommended that future research should identify how to optimise the quality of online learning, thus enabling future research to report the outcomes of online learning without those outcomes being moderated by variations in quality.

Cook and colleagues described some of the distinct benefits of online learning, the most important of which was that online learning resources can be easier to access than face-to-face training. In healthcare settings this feature was seen to improve training access by eliminating the need for clinicians to leave their workplace and travel to training venues (Bryce et al., 2008, Cook et al., 2008, Ruiz et al., 2006). As well as improving access, this feature meant that online learning could be made available to large numbers of staff simultaneously, enabling concurrent system-wide staff training (Covell et al., 2011). Flexible access is particularly important in medical education where protected time for study is not always available (Bryce et al., 2008, Cook et al., 2008).

7.4.1.2 Wong et al., 2010

Realist methods are primarily qualitative and involve researchers iteratively testing theories against a range of data to identify which theories apply, and which do not. Realist research aims to identify what works, for whom and in what contexts and seeks to identify context-mechanism-outcome configurations that can explain evidence of efficacy. In their realist review of online learning in medical education, Wong and colleagues identified that ease of use, perceived advantage over face-to-face training and subjects that were compatible with learners' ideologies were the most important factors in the success of online learning (Wong et al., 2010). The review found that the

TAM explained satisfaction with online learning resources. A finding that influenced the inclusion of that model in the present study.

This review highlighted that a major issue for online learning, is in its reliance on learners' motivation. If online learning is unused then it will be ineffective (Bryce et al., 2008, Calder et al., 2017, Ruggeri et al., 2013). Such a broad statement is, of course, true for face-to-face learning, but the experience is different for online modules. It is, for example, less socially acceptable for a learner to walk out of face-to-face learning courses than it is for them to stop using an online learning module. The ability to leave an online learning module at any point is compounded when online learning is often completed in workplaces that contain distractions such as office telephones, work colleagues and service users (Zureick et al., 2017, Kohan et al., 2017, Croll, 2010). The reliance on the continued motivation of learners in online learning forms the basis for Objective 7 in the present study that seeks to identify what motivates SMW to attend training.

Wong and colleagues also highlighted the issue of technical competence among learners, suggesting that the learner's ability to use technology could make an online learning module ineffective. Despite the widespread use of internet technology (Office for National Statistics, 2018), many people lack confidence and competence in using it (Ruggeri et al., 2013). Some commentators have suggested that leaners should be taught to use internet technology prior to accessing online learning (Pickering, 2017) to improve the efficacy of all online learning modules. The limits of learners' digital literacy can be compounded if online learning modules are poorly designed (Johnson, 2006) causing engagement, retention and efficacy to suffer. The present study will therefore seek to identify the competence and competence of SMW in using online learning resources, forming Objective 11.

To address these technological barriers, Wong suggested that providers of online education should design modules with the learner in mind (Wong, 2012). Learners are not necessarily confident at using technology and are likely to access the internet using a range of technology. These factors must be accounted for if their potential to act as a barrier is to be addressed (Carroll and Rounsaville, 2007). Garcia-Lopez and colleagues recommended that designers assume that learners have a wide range of abilities and design online learning accordingly. They suggested a similar approach for the wide range of technology used by learners including new and old Smartphones, computers and laptops (Garcia-Lopez et al., 2017). These findings influenced the inclusion of Objective 9 in the present study that seeks to identify the types of internet technologies used by SMW.

7.4.1.3 Cook et al., 2013

In 2013 Cook and colleagues conducted a meta-analysis of instructional design features within online medical simulation education (Cook et al., 2013). Instruction design refers to the way in which educational resources are designed (Cook et al., 2010, Weingardt, 2004). Cook and colleagues reported that distributed practice, feedback, individualized learning, interactive elements, longer time, multiple learning strategies and a range of difficulty, were all found to improve the quality of online learning. This analysis expanded on previous findings by describing elements of online learning that could be used to improve quality. Their focus on simulation education indicated an emerging field in online education. Simulation education is often based on reconstructions of clinical situations that the learner then interacts with. Learners can then explore a range of clinical responses that affect the outcomes of simulated patients, gaining feedback from their actions and responses. This has been used successfully to train MI skills and approaches to psychiatric comorbidities in medical students (Hayes-Roth et al., 2004, Fernando et al., 2017). An important benefit of simulation-based education is that it enables learners to gain clinical experience without the risks attached to treating real patients (Hegland et al., 2017, Cleland, 2017, Cook et al., 2018). Simulation education can also be effective when recreating entire systems such as clinics and emergency response situations where they have be used to train whole teams or departments in order to develop coordinated responses (Youngblood et al., 2008, Ingrassia et al., 2013).

7.4.1.4 McCutcheon et al., 2014

In 2014 McCutcheon and colleagues conducted a review of studies comparing online and blended learning to face-to-face learning for undergraduate nursing students (McCutcheon et al., 2015). They identified 19 studies from between 1993 and 2012 from eight countries. They found that online learning for clinical skills was comparable to face-to-face methods, but also identified some studies where this was not the case. A finding that again indicates the variable quality of online learning resources. They identified a lack of studies that reported outcomes from blended learning approaches, where online and face-to-face methods are used together. They also highlighted that the variety of methods, tools and evaluations used in studies of online learning made comparisons between studies difficult.

7.4.1.5 Sinclair et al., 2016

In 2016 Sinclair and colleagues conducted a systematic review of randomised controlled trials (RCTs) studying the effectiveness of internet-based education on clinical behaviour and patient outcomes

(Sinclair et al., 2016). They included RCTs where outcomes of clinician behaviour or patient outcomes were measured objectively and not by self-report. They identified just seven studies meeting these criteria, none of which measured patient outcomes. Because of this and also because of the considerable design, population and methodological variation of samples in the included studies Sinclair and colleagues were unable to pool data to draw conclusions. They suggested that the wide range of studies was indicative of a field where there was no 'one size fits all' solution, and that online learning might be necessarily different according to subject, working context and intended recipient. In accordance with Cook and colleagues' findings in 2008, Sinclair and colleagues found that online learning methods appeared to be as effective as face-to-face training and superior to no training at all.

7.4.1.6 Calder et al., 2017

In 2017 Calder and colleagues conducted a systematic review of online training for SMW (Calder et al., 2017). The review's focus on SMW, makes it the most relevant review for the present study. The review identified 16 articles comprising 14 unique studies of online learning designed for SMW. There were eight RCTs, three randomised trials, two pilot studies, one cross-sectional study, one longitudinal and one qualitative study. Fourteen studies reported changes in knowledge, skills and attitudes or behaviours attributable to online training, three discussed the qualitative experience of using online training and one reported the cost of delivering online training.

The review concluded that, whilst definitive conclusions could not be drawn, there was evidence to support the findings of Cook and colleagues' meta-analysis in 2008, that online training could be as effective as face-to-face training for SMW, and that it was routinely more effective than no training. The effectiveness of online training for SMW was not limited to specific subjects and included therapeutic skills such as reflective listening (Shafer et al., 2004) as well as interventions such as CBT, CM and MI. Two of the included papers (Leykin et al., 2011, Weingardt et al., 2009) suggested that the format of online training could change the experience of those using it, suggesting that a more flexible module was associated with lower scores for stress and burnout among participants. The qualitative studies also reported that the ability of online training to relate to their work setting was important for learner satisfaction (Curran et al., 2015, Larson et al., 2009, Shafer et al., 2004). One study found that, in the learner group of 49, face-to-face training had been twice as expensive as comparable online methods (Rawson et al., 2013).

Well-designed online resources are not cheap to build and maintain (Hollands and Tirthali, 2014). Reductions in cost attributed to online learning often derive from reduced need for training

premises and travel (Bowen et al., 2014, Deming et al., 2015). Online learning has further potential for cost reduction when delivered to large numbers of people, thus capitalising on economies of scale (Rawson et al., 2013, Ruiz et al., 2006). It is worth noting that if low numbers of learners use online learning because they prefer face-to-face methods then those economies of scale will not be realised. Factors of cost are likely to be experienced by organisational stakeholders rather than SMW themselves, hence the inclusion of key stakeholder (KSH) perspectives on identifying barriers to training in the present study.

The limitations of this review included the heterogeneity of research methods in included studies, the lack of online learning quality assessment and the lack of replication and replicability. The review underlined the importance of research on optimising the quality of online learning for SMW. It also highlighted that such optimisation would be aided by research that describes the characteristics, needs, and working contexts of SMW.

7.4.1.7 Jackson et al., 2017

In 2017 Jackson and colleagues conducted a systematic review of web-based training methods for behavioural health practitioners (Jackson et al., 2018). Due to the range of included studies they were able to provide indications about the efficacy of distinct elements within online learning modules. For example, they suggested that virtual classrooms were less effective than face-to-face classrooms and that simulation training and serial instruction were both related to positive learning outcomes. They also reported mixed results from post-training interventions designed to address diminishing returns from training. They concluded that online methods may be effective for training behavioural health practitioners.

Jackson and colleagues also cited the heterogeneity of methodological approaches, the low quality of research (e.g. few control groups and few standardised evaluation measures used in included studies) and the wide variation of training methods as barriers for drawing further conclusions from the evidence.

7.4.2 The quality of research in online learning

The reviews raise many issues about the quality of online learning provision and the quality of research in online learning. Many studies assessed whether online learning 'works', yet if the quality of that training is uncertain, then it may be those specific courses that work (or that do not work) rather than a limitation of online training as a method (Finch and Jacobs, 2012, Blood-Siegfried et al.,

2008, Calder et al., 2017, Scott et al., 2017a). This uncertainty makes comparisons between online learning modules problematic with any observable outcomes from online learning potentially moderated by their uncertain quality. Furthermore, the format and content of online learning in research is rarely sufficient to enable replication, thus compromising the ability of systematic reviews and meta-analyses to pool results and draw reliable conclusions. Medical Research Council guidance on evaluating complex interventions (Craig et al., 2008), states that interventions must be optimised according to all the available literature before an effective evaluation can be carried out. There is insufficient replicated research on how to optimise online learning for this to happen, thus preventing effective evaluation. It is this issue of quality that informs the aim of the present study. Online learning must be optimised according to the needs, preferences, working contexts and abilities of SMW. This study will identify those factors that can be used to optimise the quality of online learning for that population. As well as informing the overall aim of the study, the reviews can inform individual objectives. Objective 4 seeks to identify the training needs of SMW, and Objective 2 seeks to identify the working contexts of SMW. These will address areas where data are routinely missing from published studies.

7.5 Summary of diffusion, training and online training

Treatment for addiction can be effective in reducing drug use, harms and mortality among those seeking help. In England, addiction treatment is provided by NHS and third-sector organisations within complex healthcare systems that have been subject to reduced funding and increasingly regular recommissioning over the last ten years (Public Health England, 2014j). Treatment as delivered in community settings is often suboptimal or rarely delivered despite evidence of efficacy. Barriers to effective diffusion include resistance from staff, inadequate funding, organisational barriers, a lack of training and the nature of some innovations.

Training can be effective at reducing many of these barriers and in improving the delivery of best practice, although the effects of training are not absolute and often diminish over time. Online learning has been shown to be equally as effective as face-to-face training and can be delivered with flexibility, ease of access and economies of scale. Despite the potential for online learning to improve best practice in addiction treatment settings, there are few studies that report its effectiveness. Those few studies that have been published are varied in design, insufficient in detail to enable replication and often use self-report as a proxy for quality. Ensuring the quality of online learning is important to enable evaluations of its efficacy. Little is known about how to optimise the quality of online learning. Less is known about the workforce for whom online learning would be

optimised. Both gaps in the literature must be addressed if online learning for SMW is to fulfil its potential and contribute to improved standards of care for addiction treatment service users.

7.6 Theoretical perspectives

The potential of the internet to improve the provision of addiction treatment is sufficient to merit research. There is little research of SMW working in the third-sector, therefore models and theories were sought that could provide a framework for the research design (Creswell, 1994). Four theoretical perspectives were identified to inform the present study: UCD, Roger's DOI, the TAM and pedagogic theories of learning.

UCD is an approach that is uses research methods to identify ways of optimising the quality of online resources by identifying the needs, contexts and expectations of the 'end-user' (the person who will use a product). The TAM similarly focuses on the perceptions of end-users and was developed to understand the factors that influence the uptake of new technology. Rogers's DOI is based on a history of studying diffusion processes and has been widely adopted in healthcare settings. It describes the factors, stages and systems that can encourage or prevent diffusion. Online learning is itself an innovation that requires diffusion, yet its aim is to enable the diffusion of best practice through staff training, dissemination and skills development, making Rogers's model of diffusion important to consider. Finally, the chapter will sum up pedagogic theories that are relevant to learning, online learning and skills development.

7.6.1 User-Centred Design

Product design often seeks to influence the behaviour of those using it (Cooper et al., 2014, Wever et al., 2008, Bhamra et al., 2008). Architecture influences the movement of people around a building, Smartphones enable and encourage use of social media whilst on the go (Cook et al., 2010, Maguire, 2001). UCD is a form of interaction design that describes how to build an understanding of end-users, their behaviours, expectations and needs in order to design products for them. UCD was first described in 1986 by Draper and colleagues who proposed it as a way of bringing together a range of existing design principles (Norman, 1986). Initially UCD sought to understand an end-user's 'mental model' of a product so that new products would accord with, or develop that mental model (Cooper et al., 2014, Norman, 1986). In UCD a 'mental model' represents the consumer's view of how a product works that often ignores technical, mechanical or operational nuance. It comprises a simple explanation containing just the information necessary for a consumer to use that product. In

the field of addiction, buprenorphine might be seen as a 'blocker', with little further thought given to its exact psychopharmacology. That it blocks the effects of heroin may be sufficient information for a worker or a service user and would represent their mental model. A design principle emphasised by UCD is that new designs should be based on end-users' existing mental models.

More latterly UCD has involved building an understanding of an end-user's primary tasks, needs, goals and contexts of use to ensure that these are accommodated through product design. There is an important distinction within UCD between end-users' wants and needs. UCD does not advocate simply asking end-users what they want before acquiescing to those requests. Instead, it recommends using research methods to understand end-users' unstated and sometimes unconscious needs so that resources can be designed to meet those needs (Nies and Pelayo, 2010, Williams, 2009). The immediate wants of end-users are often based on preconceived ideas of what is possible or on previous experiences. UCD suggests that satisfying resources are those that meet the unstated needs as well as the explicit wants of end-users. UCD also recommends the creation of 'personas' on which to model potential solutions. Personas are fictional characters whose characteristics are derived from research data and who represent subgroups of end-users. Online designs can then be tested against these models to ensure that the needs of different subgroups are met by design decisions.

The use of user-centred research is widespread in commercial settings (Fisher and Wright, 2010, Moth, 2013), yet its use in healthcare training is rarely reported. Indeed, few studies of online learning focus on design in any detail, and some have noted the ubiquity of poor design in medical healthcare (Johnson, 2006). Research that uses UCD tends to compare outcomes from using a website based on UCD with outcomes from using no website at all, and therefore the contribution of UCD to outcomes can rarely be analysed (Cole et al., 2004, Merino et al., 2011, Sax et al., 2007). In these cases, UCD is used as a tool for optimisation of a website rather than as a subject of study in itself. This lack of rigorous studies of outcomes attributed to UCD was highlighted in a critical analysis of user experience research in 2011 (Bargas-Avila and Hornbæk, 2011).

7.6.1.1 User-Centred Design in the present study

Principles of UCD inform how the content and format of online resources can affect user behaviour. They also inform how the characteristics, perceptions and needs of end-users, as identified by research, are necessary for the optimal design of online resources. Principles of UCD have informed the inclusion of Objectives 2 and 4 in the present study, that seek to identify the working contexts of SMW as well as their training needs. The study will seek to move beyond a simple description of

training needs to identify needs resulting from work pressures and personal goals. UCD has also informed the inclusion of Outcome 6 which will identify what motivates SMW to access training. There is currently little research on the needs, contexts and perceptions of SMW working in English third-sector organisations, and none that seeks to identify unstated need and their motivation to access and attend training; this absence of knowledge deters development in the area of online learning (Calder et al., 2017) and will be addressed in the present study.

The importance of developing personas for UCD informed the decision to use latent class analysis (LCA) in the present study. The LCA, based on participants' delivery of interventions for service users, was used to identify subgroups of participants with different needs and working contexts that would inform the design of online learning resources.

7.6.2 The Technology Acceptance Model

The TAM describes the adoption of new technologies and was initially developed from the theory of reasoned behaviour (Davis, 1985, Venkatesh and Davis, 2000). The theory of reasoned behaviour suggests that people make rational choices about how to behave and that these choices are based on an analysis (albeit often hasty) of attitudes, norms, perceived behavioural control and intentions relating to a particular behaviour (Armitage and Conner, 2001). For his doctoral study, Davis applied the theory of reasoned behaviour to the intended and actual use of computer-based systems by students and staff in a university setting (Davis, 1985). The TAM identifies 'perceived usefulness' and 'perceived ease of use' as the two main factors determining whether someone uses new technology. That is, if an end-user thinks technology will be useful, this will increase their likelihood of using it. Similarly, if they think technology will be easy to use, this will also increase their likelihood of using it.

The TAM is simple in that it focuses on just two reasons for adoption of technology. It is also supported by robust empirical evidence, some of which is in the field of healthcare education (Calisir et al., 2014, Chang and Tung, 2008, Bartholomew et al., 2007). The model has remained in use since its inception despite the many changes in computer technologies demonstrating its transferability and continued relevance. One strength of the TAM is that it can guide development of computing technologies rather than simply predict or explain current use. It can inform the design of products to ensure that they are perceived to be useful and easy to use.

Criticisms of the TAM mostly focus on its simplicity (Bagozzi, 2007). Many studies have used the TAM to guide their research and several have identified more variables than just perceived usefulness and

perceived ease of use, including societal norms, digital literacy, availability of technology, organisational support and personal values (Chen et al., 2002, King and He, 2006). The simplicity of the TAM can also result in information that is too broad to be of use. Just because something is perceived as not being 'easy to use' does not always explain enough to implement strategic change. The model is so broad that it has universal application, yet this can leave it so thin on detail that can inform the researcher on anything beyond broad implications (Lee et al., 2011, Legris et al., 2003).

Whilst the TAM has persisted through developments in computing technology, it needs constant review to check its applicability to contemporary uses of technology. As people become more used to using computer technologies, the way technology is selected may have more to do with Google search results than with perceived usefulness (Judd and Elliott, 2017). The TAM may evaluate why technology is taken up or not, yet it is more common for users to have the choice of many technologies from which they can select. The TAM then assumes a rational choice is made, reflecting its basis in the theory of reasoned behaviour, yet accidental selection, emotion and impulse all contribute to the use of technology (Sniehotta et al., 2014).

7.6.2.1 The Technology Acceptance Model in the present study

The TAM is useful for studying online healthcare education because it describes the likelihood that an end-user (in this case SMW) will use and accept computer-based educational systems. As already discussed, a principle benefit of using online technology for healthcare education is that it can reach large numbers of people and that it can disseminate to geographically isolated locations. Benefits that can only be realised if those people use those online learning resources. The TAM can not only inform the likelihood of SMW using online learning, but it can also be used to optimise that likelihood. Accordingly, the TAM contributed to Objectives 4 and 7 that seek to identify the needs and motivations of SMW, and Objectives 10 and 11 that seek to identify online resources used by SMW as well as their confidence and ability in using them.

7.6.3 Diffusion of Innovation

Rogers's 'Diffusion of Innovation' was first published in 1962, with the fifth and most recent edition published in 2003 (Rogers, 2003). Rogers modelled factors that affect how and when innovations are adopted into everyday practice. His initial studies were focused on the adoption of agriculture innovations among farmers in the US. Since then studies of diffusion have become more widespread but have been particularly influential in healthcare settings (Garner, 2009, Berwick, 2003,

Greenhalgh et al., 2004) where they have been used to study delays in the implementation of healthcare treatments. Rogers describes the process of diffusion in healthcare as one that happens through five stages: knowledge creation, persuasion of clinicians, decisions to adopt the innovation, implementation processes and confirmation. He also identifies five factors that can affect the speed and reliability of diffusion: the characteristics of the innovation, communication channels, characteristics of individuals, time, and social systems.

The characteristics of innovations can influence diffusion. These characteristics included the relative advantage of that innovation over other innovations, the compatibility of that innovation with existing systems and values, how complex the innovation is, how easy it is to trial and how easy it is to observe. These factors relate directly to the issues affecting adoption of addiction treatment such as CM where incompatibility with existing values has been shown to prevent diffusion (Sinclair et al., 2011), CBT where its complexity has been noted as a factor (Carroll, 2014), and prescribing where observing delivery has influenced uptake (Duchanne et al., 2007). Rogers described how different forms of communication can affect diffusion. He highlighted that communication from outside a person's immediate social network, such as from mass media, can be effective in the knowledge stage of diffusion, whereas interpersonal communication is more effective in the persuasion part of the process. Also, that the effectiveness of different forms of communication differs between individuals.

Rogers identified five types of individuals that influence diffusion: innovators, early adopters, early majority, late majority and laggards; where innovators are first to try new innovations and laggards the last and most reticent. Rogers suggested that motivating factors were different for each type of person. Social systems that influence diffusion are largely made up of a number of units that are linked with each other. These units can represent individuals with the same profession such as nurses, or it can involve departments within organisations. The ways in which these units communicate with each other can affect diffusion. Rogers suggested that communication within social structures occurs in two primary ways, first are formal structures which can include policies, meetings, agreed forms and routines of communication. Second are the informal communication channels developed between individuals with shared interests or common goals. Both these forms of communication influence the ways in which organisations communicate, information disseminates, and innovation diffuses.

In Australia, Rogers's DOI was used as the basis for a large study of workforce development. This organisational approach was completed by the National Centre for Education and Training on Addiction (NCETA) for the Australian government and used domains based on Rogers's DOI to assess

factors that influence diffusion in addiction treatment settings. It was designed to identify structural factors that could then be addressed in order to improve diffusion within those systems (Pidd et al., 2004). This work applied Rogers's theory directly to the workforce and studied the role of training. Addy and colleagues (Addy et al., 2004) developed post-training assessment tools to identify the extent to which training was relevant and easy to implement in participants' workplace; thus, identifying organisational readiness to change. The purpose of these tools was to identify systematic deficiencies that must be addressed for workforce development to take place. Roche and Nicholas in 2016 called for a paradigm shift in how addiction treatment workforce development is viewed, from one of training staff to one of identifying and addressing system wide deficiencies to ensure diffusion (Roche and Nicholas, 2016).

7.6.3.1 Diffusion of Innovation in the present study

The five elements that can affect diffusion as described by Rogers, were all considered in the present study. The characteristics of innovations that are used by SMW are included in Objective 8 that seeks to identify how research and EBP is currently accessed and used by SMW. It also informed Objective 10 that seeks to identify the types of internet resources used by SMW. The forms of communication part of DOI informed Objective 3 that seeks to identify current training including formal training, mentoring and shadowing. It also provides a rationale for Objective 9 in understanding the technologies used by SMW when accessing the internet, and how these can affect access to online communication channels. As with UCD, DOI emphasises the importance of understanding of the individual or end-user. They are one of the five elements that contribute to the adoption of EBP, but in the context of addiction treatment remain relatively unknown.

7.6.4 Relevant pedagogic theories

There are many theses that could be written about how people learn, and how traditional learning theories translate to online education. The present study is of SMW and how online learning can be optimised for them. Therefore, an overview of ways in which people learn will help analyse the different ways in which SMW might use online learning. A summary of relevant pedagogic theories is presented here.

Cognitive learning theory (Ausubel et al., 1968, Gottlieb et al., 2017) emphasises the importance of students learning concepts and principles which are then applied to both existing and new knowledge. This then engenders continuous and self-directed learning from new experiences that

will extend beyond initial education or training. Online learning can aid this process by teaching those concepts and principles which learners can then apply to their clinical settings. Similarly, Constructivism (Torre et al., 2006) suggests that students construct learning by assessing new experiences in the light of prior assumptions and beliefs. In medical education this enables students to learn about treatment and clinical practice through reflecting on their own practice. Constructivism suggests that learning is driven by experiences and that learners search for relevant information based on clinical situations. This theory relates closely to UCD in that it emphasises the motivation and immediate needs of learners. It suggests that online learning must respond to the treatment driven interests of the learner for it to be useful. Humanism (Rogers, 1983, Torre et al., 2006) too is focused on self-directed learning. It suggests that, rather than driven by immediate interests, the motivation for learning comes from the learner's desire to develop both intellectually and personally, often referred to as 'self-actualisation'. Humanism has relevance for personal development aspects of online education and how they might motivate people to use those resources.

Cognitive Load theory (Young et al., 2014) is highly relevant for online resources and is based on the understanding that learners have a limited amount of working memory, and that this is used by intrinsic, extrinsic and germane processes. The intrinsic processes are those needed to use a resource, the extrinsic are those that are not needed but that are used in relation to the task, whilst germane load refers to processes that facilitate learning. The theory recommends minimising the levels of working memory and cognitive load needed for intrinsic and extrinsic processes and therefore maximising the germane capabilities of the student. It explains that learning suffers if the combined cognitive load exceeds that of the users working memory (Young et al., 2014)

Behaviourism (Skinner, 1974) suggests that learning and demonstrating new behaviours and is the primary outcome of education. The approach is teacher-centred and is focused on replication of observable behaviour. Similarly, Social Learning theory (Bandura, 1978, Parcel and Baranowski, 1981) focuses on the observation and replication of behaviours. The student in social learning theory does not learn from a specific and identified teacher, rather they assimilate learning from a range of sources within their social group. These learning theories suggest that face-to-face interaction is important for learning and that people learn from their colleagues and through observing replicable behaviour. The extent to which this is possible when that behaviour is viewed through the internet is uncertain (Torre et al., 2006).

Kolb identified four learning styles that matched four stages in a learning process, suggesting that learners will often prefer one type of learning over another (Kolb, 1976). This range of learning styles

is important for the design of online learning because it describes contrasting preferences between different learners, suggesting that a one-size-fits-all approach is unlikely to be attractive to all learners.

7.6.4.1 Pedagogic theories in the present study

The ways in which people learn knowledge and skills is important to a study that focuses on education and training. The implications of pedagogic theories on online learning have influenced Objective 3 which seeks to identify the full range of training currently accessed, to enable data that describes how SMW learn rather than simply how they are formally taught. Therefore shadowing, skills practice and the ability to learn from one's own clinical practice through reflection were included in this broad objective. Objective 4 which identifies the training needs of SMW also takes into account the learning styles and preferences of SMW as described by pedagogic theories. Other barriers to learning, be they physical or educational are covered in Objective 6 and informed by the pedagogic theories summarised above.

7.6.5 Summary of models and theories

These models and theories are all relevant to the design of online training. UCD and the TAM both describe critical factors to inform the optimisation of online resources. They describe how to influence engagement and acceptance among learners, two factors that are central to the success of online learning resources. Both UCD and the TAM highlight the importance of understanding an end-user's perspective when designing online resources. UCD further describes research methods and processes to collect such, emphasising the importance of qualitative research and the development of personas against which design prototypes can be considered. Rogers DOI describes factors that can help and hinder diffusion and provides guidance to aid the diffusion of online learning as a method and can inform how online learning can then contribute to the diffusion of EBP for SMW. Pedagogic theories describe the different ways in which people process information in order to learn and develop new skills. Designers must consider the implications and perspectives of all these models and theories in order to optimise the design of online learning resources for SMW.

7.7 UK substance misuse workforce studies

The present study focuses on SMW working for third-sector organisations providing addiction treatment services in England. There are very few studies that describe this population, therefore to

increase the scope of the literature on SMW, literature on SMW from the UK and from NHS settings were included. The present study identified 14 published articles that described the skills, education and characteristics of the substance misuse workforce (Table 2 and

Table 3). These studies vary greatly in methodology and sampling, with some focusing on SMW within NHS services (Cookson et al., 2014, Sondhi and Day, 2014, Luty and Rao, 2008) others on SMW working in therapeutic communities (Gosling, 2017) some cover a range of services and workers (Smith, 2011).

The demographic characteristics of SMW in these articles are not reported with any consistency. The gender of participants ranged from 52% female to 76% female. The mean age ranged from 34 to 40. Just two studies reported the ethnicity of SMW, these both reported 86% of SMW participants were 'white British' or 'white UK' (Schulte et al., 2010, Mills et al., 2003). The most detailed (although not peer-reviewed) study was a training needs analysis of the English SMW published by the NTA in 2003 (Mills et al., 2003). The study included data from 2,186 SMW concerning their training and training needs to inform a training strategy. They reported that 66% of SMW were female, most were aged 31-40 (37.7%), 63% had a first degree or higher level of education, 79% had a professional qualification and 86% identified as White British. They found that SMW had training needs in 'alternative therapies', 'counselling techniques', 'HIV and AIDS' and 'steroids and stimulants'. They also found they had broad training needs in 'accessing new knowledge', 'assessing and dealing with risk', 'counselling through recognised methods', 'dealing with aggressing and abusive behaviour', 'dealing with diversity issues', and 'raising awareness and disseminating information' (Mills et al., 2003).

Two other training needs analyses were published, one in Wales in 2005, and one by a local authority in Scotland in 2011 (Welsh Assembly Government, 2005, Smith, 2011). The Welsh training needs analysis included data on 556 SMW and identified training needs of 'fatal, and non-fatal overdose', 'preventing abusive and aggressive behaviour', 'prevention activities' 'providing education' and 'providing support'. The needs assessment conducted in Moray, Scotland, concluded that 70% of SMW preferred external training courses with only 20% in favour of using e-learning. They identified a need for training in 'dual diagnosis', 'groupwork', 'specialist assessments' and 'sustainable recovery'.

Other findings from these studies included that addiction treatment provision can be difficult when provided in complex funding and delivery structures (Sheridan et al., 2011), that supervision and a sense of ownership among staff improved implementation, (Sondhi and Day, 2014), that high workloads, poor management and low levels of personal achievement were related to stress and burnout (Farmer, 1995, Oyefeso et al., 2008), that low importance was placed on smoking cessation among SMW (Cookson et al., 2014), that funding pressures and outcome measurements risked oversimplifying some of the complexities of addiction treatment (Gosling, 2017), that SMW had high

levels of mistrust in government policy and strategy (Luty and Rao, 2008) and that higher levels of competence in working with dual diagnosis patients improved retention (Schulte et al., 2010).

Table 2: Studies of UK substance misuse workers (n=14): characteristics

Study, year, authors	Location	*n*	Study type / Participants	Gender	Age	Education	Working experience	Ethnicity
Albery et al., *2003* *Measuring therapeutic attitude among drug workers*	Not reported	189	Non-specialist drug workers completing a survey of therapeutic commitment and other variables	98 Female 91 Male	**Mean (SD)** 34.7 (8.4) Range: 20-56	Not reported	Participants had been non-specialist drug workers for average of 29.98 months	Not reported
Black et al., 2005 *All Wales training needs analysis: Final report*	Wales	556	Survey of the drug and alcohol workforce in Wales for a training needs analysis	Not reported	Not reported	Not reported	Not reported	Not reported
Cookson et al., 2014 *Smoking and its treatment in addiction services: clients' and staff behaviour and attitudes*	England	145	Survey of staff in seven addiction services in South London and Maudsley NHS trust (SLAM)	Not reported	Not reported	Not reported	8 (6%) = Manager 25 (17%) = Registered Nurse 3 (2%) = Manager and Registered Nurse 6 (4%) = Student Nurse 7 (5%) = Clinical Psychologist & Consultant Clinical Psychologist 6 (4%) = Trainee/Assistant Psychologist 5 (3) = Training & non-training grade Doctor 2 (1%) = Consultant Psychiatrist/Physician 8 (6%) = Healthcare Assistant 25 (17%) = Substance Misuse Worker/Practitioner/Key-worker 9 (6%) = Trainee & Qualified Counsellor 20 (14%) Admin and support 16 (11%) = Clinical other 5 (35) = Non-clinical other	Not reported
Farmer, 1995 *Stress and working with drug misusers*	England	60	Survey of clinical drug treatment staff	29 Female 31 Male	**Mean (SD)** 38.7 (9.8)	Not reported	27 (45%) = Nurses 20 (33.3%) = Doctors 6 (10%) = Social Workers 3 (5%) = Counsellors 2 (3.3%) = Clinical Psychologists 2 (3.3%) = Occupational Psychologists	Not reported

Study, year, authors	Location	*n*	Study type / Participants	Gender	Age	Education	Working experience	Ethnicity
Gosling, 2017 *A critical insight into practitioners' lived experience of payment by results in the alcohol and drug treatment sector*	North of England	11	Focus group interviews with drug and alcohol practitioners working in therapeutic communities	Not reported	Not reported	Not reported	Workers in a therapeutic community	Not reported
Luty and Rao, 2008 *Survey of professional attitudes to addiction treatment policy*	England	180	Postal survey of addiction professionals in specialist NHS services in England regarding addiction treatment policy	Female = 137 Male = 43	Not reported	Not reported	Mean 9.6 years working in addictions 31% Nurses 33% Doctors 36% other (e.g. Social workers, support workers or generic 'drug workers')	Not reported
Mazoruk et al., 2017 *Prevalence of somatisation as a determinant of burnout amongst staff working in drug and alcohol services*	England and Wales	165	Survey of drug and alcohol staff concerning stress and burnout	Female = 64.2% Male = 35.8%	**Mean (SD)** 34.9 (11.2)	Not reported	Mean time in current position = 2.3 years (SD = 1.6) 61% carried a caseload	Not reported
Mills et al., 2003 *A training needs analysis of the drug sector in England: national report*	England	2,186	Survey of workforce (minus managers) for an NTA training needs analysis	Female = 66.1% Male = 33.9%	<20 = 0.2% 21-30 = 17.6% 31-40 = 37.7% 41-50 = 29.8% >51 = 14.6%	**Academic qualifications** Yes = 93.4% No = 6.6% **Of those with qualifications:** GCSE = 22.7% A-Level = 14.7% Degree = 40.0% Post-graduate = 22.6% **Professional qualification** Yes = 79.3% No = 20.7%	Not reported	White British = 86.3%

Study, year, authors	Location	*n*	Study type / Participants	Gender	Age	Education	Working experience	Ethnicity
Oyefeso et al., 2008 *Prevalence and associated factors in burnout and psychological morbidity among substance misuse professionals*	England	194	Survey of clinical staff in substance misuse services in south England	57% Female 43% Male	**Mean (SD)** 38 (9.9)	Not reported	70 (36%) = Nurses 56 (29%) = Drug and alcohol counsellors 15 (8%) = Social workers 12 (6%) = Doctors 6 (3%) = Clinical psychologists 35 (18%) = Others (e.g., occupational therapist, probation officers, outreach workers, drug support workers, etc).	Not reported
Schulte et al., 2010 *Dual diagnosis competency among addiction treatment staff: Training levels, training needs and the link to retention*	England	46	Post-training survey of dual diagnosis (addiction and mental health) practitioners	Female = 67% Male = 33%	**Mean (SD)** 40.2 (7.0)	Six participants had a National Vocational Qualification (NVQ)	Psychiatric or general nurses = 35% General counsellors = 16% Mean seven years work with dual diagnosis clients	White UK = 86%
Sheridan et al., 2011 *Influences on the provision of drug services in England: the experiences and views of front-line treatment workers*	England	32	Qualitative survey of NHS Substance misuse workers (SMW) Purposive sampling	19 Female 13 Male	**Mean** 34	'Many had taken degrees'	Average 4.5 years working in addiction treatment (n=29)	Not reported
Sinclair et al., 2011 *Clinician and service user perceptions of implementing contingency management: A focus group study*		36	Focus groups of staff about implementing contingency management	Not reported	Not reported	Not reported	Not reported	Not reported
Smith, 2011 *Training needs analysis in Moray Scotland*	Scotland	16 Qualitative 128 Quantitative	16 KSH Interviews, 128 completed questionnaires from a wide range of drug and alcohol services	Not reported	Not reported	Not reported	Not reported	Not reported

Study, year, authors	Location	*n*	Study type / Participants	Gender	Age	Education	Working experience	Ethnicity
Sondhi and Day, 2014 *Factors that predict dissemination of evidence-based practice in one local authority in England: An assessment of introducing node-link mapping into substance misuse practice*	England	44	Workshop evaluation survey following training charity and NHS workers from one local authority in England	Not reported	Not reported	Not reported	Not reported	Nor reported

SD = Standard deviation

Table 3: Studies of UK substance misuse workers (n=14): findings

Study, year, authors	Findings
Albery et al., *2003* *Measuring therapeutic attitude among drug workers*	Education for these participants was related to therapeutic commitment via situational constraints and role support
Black et al., 2005 *All Wales training needs analysis: Final report*	Training need priorities: Preventing and managing abusive and aggressive behaviour Providing Support Providing education and prevention activities Fatal and non-fatal overdose
Cookson et al., 2014 *Smoking and its treatment in addiction services: clients' and staff behaviour and attitudes*	Demographics of staff not reported but demographics of service users were reported Low importance placed on smoking cessation by addiction treatment staff
Farmer, 1995 *Stress and working with drug misusers*	High workload, superiors and management were related to stress and burnout
Gosling, 2017 *A critical insight into practitioners' lived experience of payment by results in the alcohol and drug treatment sector*	The pressures and implications of payment by results risk compromising nuance in therapeutic treatment in the drive for specific and broad outcomes
Luty and Rao, 2008 *Survey of professional attitudes to addiction treatment policy*	High levels of mistrust and scepticism about government policy and drug and alcohol strategies
Mazoruk et al., 2017 *Prevalence of somatisation as a determinant of burnout amongst staff working in drug and alcohol services*	There was a wide range of job titles that were grouped into regulated professionals (e.g. doctors); unregulated professionals (e.g. community drug and alcohol workers); and unpaid staff Moderate burnout levels

Study, year, authors	Findings
Mills et al., 2003 *A training needs analysis of the drug sector in England: A national report*	**Training needs:** Accessing new knowledge Dealing with abusive and aggressive behaviour Counselling through recognised models Dealing with diversity issues Assessing and dealing with risk Raising awareness and disseminating information **Training needs identified by managers** Counselling techniques Alternative therapies Steroids and Stimulants Hepatitis and AIDS
Oyefeso et al., 2008 *Prevalence and associated factors in burnout and psychological morbidity among substance misuse professionals*	There were high rates of psychological morbidity and burn out Alienation and tension predicted exhaustion and burnout but not psychological morbidity. Diminished personal accomplishment associated with psychological morbidity
Schulte et al., 2010 *Dual diagnosis competency among addiction treatment staff: Training levels, training needs and the link to retention*	Identified training needs of dual diagnosis, higher levels of competence with dual diagnosis predicted better client retention
Sheridan et al., 2011 *Influences on the provision of drug services in England: The experiences and views of front-line treatment workers*	Provision supported by high commitment of SMW Work happened in complex structures with often competing ideologies and working practices
Sinclair et al., 2011 *Clinician and service user perceptions of implementing contingency management: A focus group study*	Identified a need to define CM components to aid implementation Involvement of service users important for this process too, in order to help understand the mechanisms of CM
Smith, 2011 *Training needs analysis in Moray Scotland*	Nearly 70% in favour of attending external training courses just over 20% in favour of e-learning - much the same as shadowing Cannot afford to lose staff for a whole day
Sondhi and Day, 2014 *Factors that predict dissemination of evidence-based practice in one local authority in England: An assessment of introducing node-link mapping into substance misuse practice*	Importance of supervision, lack of ownership delayed implementation

SD = Standard deviation

This array of literature helped form the objectives of the present study through identifying gaps. Objective 1 identifying the demographic and educational characteristics would enable comparison of data from the present study with the data from these previous studies to indicate whether the participant samples are comparable. The wide range of working roles suggested a difficulty in identifying working roles and structures that might affect training needs, preferences or access to online learning. In the absence of pre-defined roles, it was decided to identify roles from within the sample using an LCA which is described in Chapter 8. Despite the three large training needs analyses identified here, the most recent was from 2011 in Scotland and the largest in England was from 2003. The changes to addiction treatment provision as well as online resources since 2003 make a new needs analysis important. Furthermore, none of the training needs analyses here sought to identify needs, motivations and contextual barriers that were external to pre-defined training provision. The present study sought to update these findings as well as broaden the understanding of the contextual factors that influence online training provision, access and completion among SMW.

7.8 Background summary

Evidence of best practice as described in research findings is not widely implemented in addiction treatment settings. There is a disparity between what is known to be effective and what is delivered on a day-to-day basis. In many cases this prevents reductions in harm to addiction treatment service users. SMW training is an important and effective factor in optimising addiction treatment delivery. However, training can be costly and difficult to access. Online training has the potential to be efficient, effective and satisfying for SMW. It also has the potential to improve the implementation of new treatments. In order to optimise online resources, they must be optimised for those who would use them, in this case SMW. At present there is insufficient knowledge of SMW on which to base the design of online learning resources.

The present study aims to identify information about SMW to inform the design of optimised online learning resources. The study will identify SMW characteristics, training contexts and needs, barriers and facilitators to training, work-related contexts and needs, factors influencing motivation for training and access to and use of current online resources.

7.9 Aims and objectives

The aim of the present study was as follows:

To identify key factors relevant to the design and delivery of online learning resources for the substance misuse workforce working in English third-sector organisations

It is important to note that the key factors identified in the present study would not be tested on any online learning modules. The design of a prototype in which such key factors would be included was beyond the scope of this study and requires different resources and skills. Developing a prototype would be the next step in research optimising online learning resources for SMW. Accordingly, the present study aims to generate hypotheses about how online learning could be optimised. Hypothesis that will then need to be applied and tested.

The objectives were formed by identifying studies, models and theories that can inform the optimisation of online learning resources, as well as studies of SMW that highlight gaps in the current literature (Table 4).

Table 4: Study objectives

Objective
1. To identify demographic and educational characteristics of the substance misuse workforce
2. To identify the working characteristics of the substance misuse workforce
3. To understand the range and nature of training currently accessed by the substance misuse workforce
4. To identify the self-reported education and training needs of the substance misuse workforce
5. To identify the education and training needs of the substance misuse workforce as identified by key stakeholders
6. To understand the barriers and facilitators to accessing addiction education and training as experienced by the substance misuse workforce
7. To identify what motivates substance misuse workers to access addiction education and training
8. To identify how substance misuse workers access and use information on research and evidence-based practice
9. To identify the technologies used by the substance misuse workforce to access the internet
10. To identify the types of internet resources commonly used by the substance misuse workforce
11. To understand the confidence and competence of substance misuse workers in using internet technologies

8 Methods

This study used mixed methods, including quantitative survey data and qualitative interview data to meet the aim and objectives described in Chapter 7. This chapter will describe the methodologies used to inform the collection, organisation and analysis of data, the ontological and epistemological perspectives that relate to the research and the potential sources of bias. The chapter will then describe how participants were identified and recruited, along with the practical measures taken to collect the data but will begin with an overview of the research design.

This research is hypothesis-generating in nature. It is intended to provide data that can inform the design of online learning resources. In the absence of an online learning resource on which to test the data collected here, the data collected can only suggest needs to be met by future online learning resources. It will be in the development of such learning resources that those hypotheses will be tested. This is not a limitation, rather this research represents a necessary first step in the process of optimising online learning resources.

8.1 Research Design

8.1.1 Convergent parallel mixed methods

The aims and objectives for the research were formed following a review of the literature and relevant theories and models (see Chapter 7) and are summarised here:

> **Aim: To identify key factors relevant to the design and delivery of online learning resources for the substance misuse workforce working in English, third-sector organisations**

Objective	Method of data collection
1. To identify demographic and educational characteristics of the substance misuse workforce	Quantitative Qualitative
2. To identify the working characteristics of the substance misuse workforce	Quantitative Qualitative
3. To understand the range and nature of training currently accessed by the substance misuse workforce	Quantitative Qualitative
4. To identify the self-reported education and training needs of the substance misuse workforce	Quantitative Qualitative
5. To identify the education and training needs of the substance misuse workforce as identified by key stakeholders	Qualitative only
6. To understand the barriers and facilitators to accessing addiction education and training as experienced by the substance misuse workforce	Quantitative Qualitative
7. To identify what motivates substance misuse workers to access addiction education and training	Quantitative Qualitative
8. To identify how substance misuse workers access and use information on research and evidence-based practice	Qualitative only
9. To identify the technologies used by the substance misuse workforce to access the internet	Quantitative Qualitative
10. To identify the types of internet resources commonly used by the substance misuse workforce	Quantitative Qualitative
11. To understand the confidence and competence of substance misuse workers in using internet technologies	Quantitative Qualitative

The design of the research was pragmatic (Morgan, 2007, Neale, 2016, Creswell, 1994) and based on selecting methods that would best meet the aim and objectives of the study. Mixed methods (qualitative and quantitative) were chosen: qualitative methods would enable the research to explore areas where subjective and contextual data were required such as substance misuse worker's (SMW) experiences, perceptions and motivations, quantitative data would enable the research to explore data relating to objective answers and measurements such as demographic and educational characteristics, preferred training courses, and digital literacy. Quantitative methods would also be used to assess associations between items such as education and learning preferences. Principles of the Technology Acceptance Model (TAM) and of User-Centred Design (UCD) as described in Chapter 7, emphasise the importance of identifying the needs and perceptions

of SMW. Quantitative methods were used to identify the perceived need for and usefulness of a pre-defined list of training courses. These data were then compared to qualitative data exploring reasons why some courses were perceived to be more needed and useful than others. Once these complementary methods were analysed in parallel (convergently), more detailed conclusions could be reached than were possible with individual data sources and types.

For all but two of the objectives, qualitative and quantitative methods were used, enabling comparisons between these different types of data to provide a detailed understanding of SMW. For example, quantitative data identified the most and least common barriers to training, whereas qualitative data explored the mechanisms by which those barriers restricted access to training, and how those barriers could be addressed. Two objectives were met using qualitative data alone. Objective 5 solely related to the perceptions of Key Stakeholders (KSH) for whom there was no quantitative element in the research. Objective 8 focused on how SMW used research and evidence-based practice (EBP); the descriptive nature of the data sought for this objective was best met using qualitative methods.

Although a mixed-methods approach was selected, the qualitative data comprised a greater part of the study and analysis. This was in part driven by the emphasis of the TAM and UCD on understanding the motivations and perceptions of SMW, issues that are more suited to qualitative than quantitative data. All data were analysed convergently with results compared and contrasted where appropriate.

There would have been merit to sequential mixed-methods approaches (both exploratory and explanatory), however a convergent design was chosen because it met the hypothesis-generating nature of the research. The purpose was to use data from multiple sources to gain insights into the needs, contexts and motivations of third-sector SMW relevant for optimising online learning resources. The aim of the study was not to identify and then understand factors (which would have necessitated a quantitative then qualitative design), nor was the aim to identify, understand and then test the transferability of factors (which would necessitate a qualitative then quantitative design). Analysing the qualitative and quantitative data simultaneously met the aim of the present study.

8.1.2 Ontological and epistemological perspectives

Ontology refers to the study of what exists and is concerned with the nature of reality and how reality is structured. Epistemology refers to the study of knowledge and is concerned with the

foundations of knowledge and how knowledge can be created (Creswell, 1994, Morgan, 2007). All research involves making assumptions about the nature of what is being researched and the way in which knowledge about that research subject is created. These assumptions often take the form of a theoretical standpoint which informs the design, biases and methods of research (Crotty, 1998). In mixed methods research, it is possible to end up using contrasting ontological perspectives within one study (Morgan, 2007). On the one hand, most items in the quantitative element of the present study can be viewed from a positivist standpoint where they are viewed to exist objectively. Whereas the qualitative elements of the research can be viewed from a constructivist standpoint where they are viewed to exist subjectively in the perceptions of the participant and in ways that can be interpreted by both participant and researcher.

A pragmatic study design allows researchers to let the nature of the required data drive the methods used to collect them. Quantitative data collection was primarily used to collect data on objective factors; qualitative data collection was used primarily to identify subjective and perceptual factors. The aim of identifying ways to improve online learning means that both types of data were of practical use regardless of their potentially contrasting ontological positions.

One of the main epistemological challenges of the data collection was that all data were created from participants' self-report. The ability of participants to understand and articulate their own perspectives and motivations is not absolute. Nor is the ability of the researcher to understand and interpret those reported factors (Creswell, 1994). This issue was a driver for the addition of KSH data which, although subject to similar epistemological challenges, would enable the study to triangulate differences and similarities in the data from SMW and from those who work closely with them (Spencer and Ritchie, 2002). Furthermore, the limitation of self-report is somewhat ameliorated when it is the perspectives of SMW themselves that are required for optimising online learning resources. The data may be subject to bias, but this would be the same bias that uptake and use of online learning resources would be subject to, thus making the self-report data valuable.

Although the survey data are more reliable than the interview data from a positivist perspective, whereby they report observable data (Creswell, 1994), they are still subject to human interpretation on behalf of participants and subject to bias from the researcher through question framing, selective analysis and subjective reporting. Even a seemingly simple survey question about education history could be subject to bias from the researcher's selection of qualifications and the subject's awareness of, and identification with, those educational levels. Further difficulties emerge from the potential for participants to provide aspirational rather than objective answers.

From a pragmatic point of view, it is important to acknowledge these limits on the ability of research to produce reliable and absolute knowledge and to make efforts to minimise their impact on the findings. The first step is to understand the viewpoint, perspectives and biases of the researcher, the second is to design research where the outcomes cannot confirm or refute a preconceived notion in which the researcher is heavily invested, the third is to construct questions that reduce (as far as possible) the potential for misinterpretation or bias from either researcher or participant.

8.2 Researcher's background, beliefs and biases

8.2.1 Background and experiences – addiction treatment

The researcher has worked in third-sector addiction treatment provision as both a SMW and as a service manager. Following ten years' working in addiction treatment services he completed an MSc in Addiction Studies at King's College London. It was during this time that the researcher became interested in the relationship between addiction treatment research and addiction treatment delivery. When the researcher moved from working in third-sector addiction treatment delivery to working in academic settings, he noticed that evidence-based interventions that were well established in research settings had not been routinely delivered in the services in which he had worked. This experience was based on his own observations and not from reliable replicated evidence, and it is therefore possible that the researcher's experience of addiction treatment provision was unique. It could therefore be argued that the researcher had a direct motivation for data from the present study to confirm his perceptions about the lack of EBP in addiction treatment settings. If the present study found that EBP was routinely delivered, then his experience of addiction treatment provision would be a low-quality anomaly. To address the potential for this to bias the study outcomes, the research was designed so that it did not seek to identify a lack (or presence) of EBP, rather it was designed to identify how EBP could be better disseminated. Accordingly, none of the data from the present study would be able to validate or challenge his experiences of working in the sector. Thus, reducing the potential for bias resulting from his previous working experiences.

The researcher has a bias towards the usefulness of end-user focused research in designing online resources. This was demonstrated by the time spent designing the research, applying for funding and completing the study. This bias could have caused the researcher to be reluctant to conclude that there was little merit to online learning for SMW. Again, the potential for this bias to influence the research is low, because the research cannot determine whether online learning is an effective tool. The research was designed to identify factors that could be used to optimise online resources.

The optimisation of a complex intervention is an important step in the process towards evaluating the intervention itself (Craig et al., 2008). Future studies may be able to study the influence that optimised online learning can have on treatment delivery outcomes. But the present study provided analyses to enable optimisation rather than analyses to evaluate end-user research. There are, of course, many ways in which the researcher's future career intentions could influence the research. However, these would invariably motivate the researcher towards rigour rather than towards any specific outcomes. A second source of potential bias comes from the participants of the present study. Accordingly, a description of the population and participants is necessary.

8.3 Population, participants and sampling technique

8.3.1 Third sector substance misuse workers

Third-sector SMW are an underexplored population with little published data on their demographic characteristics, working roles, education, and working contexts (Calder et al., 2017) (see Chapter 7). It was this lack of data combined with their increasing role in the delivery of addiction treatment that made third-sector SMW an important subject of research (Macmillan, 2010, Dickinson et al., 2012). These same factors made defining that population challenging. It was not possible to define the population by job role, by professional qualification or by sampling frame. In keeping with the aims of the study it was decided to identify the population by their opportunity and ability to deliver EBP. Therefore, the population and participants were defined as SMW working for third-sector organisations and who had direct contact with service users (Table 5).

No further specification was placed on the population because the nature of that workforce is largely unknown, and therefore further specifications would be based on assumptions of the roles within addiction treatment organisations and would therefore be prone to bias. The researcher considered excluding qualified medical professionals who might work within third-sector services because their continuous professional development requirements might make their access to training different from other third-sector SMW. However, their exclusion would risk distorting the composition of the third-sector SMW that were the focus of the research. Therefore, all third-sector SMW whose jobs involved regular contact with service users were included in the study population.

The only limitation placed on the inclusion criteria for SMW, was workers who did not directly work with service users, including managers and directors. The systems approach advocated by Roche and colleagues (Roche and Nicholas, 2016) details that the systems within which staff work can be as important to the delivery of EBP as SMW themselves. Therefore, data collection for people whose

jobs did not involve regular contact with service users was designed to capture their strategic influence on implementation and training. A separate topic guide and recruitment process was designed for KSH.

Table 5: Inclusion criteria for substance misuse worker participants

Inclusion criteria	Exclusion criteria
Working for a third-sector organisation providing treatment services in England 'Front line' workers with direct service user contact Adults over 18	People without regular direct service user contact Addiction treatment staff who do not work for a third-sector organisation

8.3.2 Key Stakeholders

The KSH interviews were designed to add context to SMW data with many KSH working within the third-sector organisations that were approached for recruitment. Some KSH were recruited from outside third-sector organisations and were identified as people who had an interest in, and influence on, training provision and the quality of service provision (Table 6). These included people working in policy, commissioning, dissemination, and regulatory roles. KSH were identified through discussion with participating third-sector organisations, and there were fewer restrictions placed on their inclusion. The KSH were not from an identifiable population, rather they were defined by their professional interest in addiction treatment provision and in staff training.

Table 6: Inclusion criteria for key stakeholder participants

Inclusion criteria	Exclusion criteria
Adults over 18 People with a professional interest in the quality of service provision, staff training or implementation of evidence-based practice People with the ability to influence the quality of service provision, staff training or implementation of evidence-based practice People responsible for training substance misuse staff People responsible for the quality for service provision who work in the third-sector People responsible for managing substance misuse staff in the third-sector People responsible for commissioning substance misuse services People responsible for policy development relevant to substance misuse treatment provision	People working directly or primarily with substance misuse service users People who are primary recipients of substance misuse staff training People unable to influence treatment provision and staff training

8.3.3 Recruitment

8.3.3.1 Identifying third-sector providers

Third-sector addiction treatment providers in England were identified using National Drug Treatment Monitoring System (NDTMS) reports (Public Health England, 2014a, Public Health England, 2014c, Public Health England, 2014b, Public Health England, 2014d, Public Health England, 2014i, Public Health England, 2014e, Public Health England, 2014f, Public Health England, 2014g, Public Health England, 2014h). All publicly funded addiction treatment providers are required to submit monthly activity reports to NDTMS. NDTMS then provides monthly reports on the provision of addiction treatment in England, including the names of all organisations providing that treatment. Once NHS trusts were excluded, third-sector organisations were identified from the resulting list. The final list of third-sector organisations was arranged by size with those organisations with the largest number of services at the top. The 15 third-sector addiction treatment organisations with the largest numbers of services were approached via e-mail. Where organisations did not reply, a follow-up email was sent, and telephone contact was attempted. If there was still no reply the organisation was not recruited.

The exact recruitment process varied between organisations so will be described for each organisation (Table 7).

Table 7: Recruitment processes for addiction treatment gatekeeper organisations

Organisation	Recruitment process	Recruited
Treat1	Treat1 responded three days after initial email contact. They allocated the enquiry to their head of training who was also responsible for their online training content. Information on the research was provided on request. The research was approved in their Quality and Clinical Governance meeting. The survey was then distributed in October 2016. They initially decided to distribute it in a newsletter item rather than in an email to staff. They, like many other organisations were concerned about overloading staff with email requests. This approach produced few responses and they subsequently put a link on their intranet.	Yes
Treat2	Treat2 responded within one day to the initial email. Information was provided on request, and the research was discussed and approved at a research specific meeting. The research was assigned to a director with an interest in staff training. The survey was distributed by email in September 2016 with a second reminder sent via managers in October 2016.	Yes
Treat3	Treat3 responded within one day of the initial email and the request was forwarded to their head of training. Information was provided on request. Once the survey had been finalised it was approved by the directors and was emailed to all staff in October 2016.	Yes
Treat4	Treat4 replied to the initial email in eight days. They said they were keen to be involved with the research. Information was provided on request. The research was allocated to a worker in their communications team who would manage the research for them. They presented the research to a managers' meeting where it was felt that the survey would be too onerous for staff to participate in. They then declined to participate in the research.	No
Treat5	Treat5 did not respond to the initial email request. But did respond to a second email. They responded within one day asking for further details about the research which were provided. Further information was provided at a meeting with the head of HR and the head of training. Distribution of the survey was delayed because they were already running a survey among staff and they did not want to overload staff. The survey was distributed in February 2017.	Yes
Treat6	No response following repeated attempts to make contact.	No
Treat7	Treat7 did not reply to the initial or follow-up emails. When I made a follow-up telephone call I was told that the organisation sometimes did not participate in research and that if I had not received a reply then I should assume that they were not going to participate.	No
Treat8	No response following repeated attempts to make contact.	No
Treat9	Treat9 did not reply to the first email but responded quickly to the second. Information about the research was provided on request. The research was approved by their Human Resources department and the survey was sent out to all staff. There was a delay to the initial survey being sent out because of the summer holidays (and low staffing) and because of concerns about the timing of Treat9's own staff survey. The survey was distributed in November 2017. A follow-up request was sent to managers to increase responses.	Yes
Treat10	No response following repeated attempts to make contact.	No
Treat11	Treat11 responded in 13 days saying that people requiring help with research projects should contact their nearest service. A second email was sent stating that the research required an organisational approach and for them to act as a gatekeeper and received the same response. With the organisation declining to act as gatekeepers, it was decided not to approach individual services.	No

Organisation	Recruitment process	Recruited
Treat12	Treat12 did not respond to initial emails. During a follow-up telephone call, the administrator advised contacting the Deputy Chief Executive. This was attempted on numerous occasions but received no response.	No
Treat13	Treat13 replied within one day. Their Human Resources and Training manager worked with research and I provided information as required for the Chief Executive's approval. I sent information but was subsequently unable to gain a further response despite numerous attempts at further contact.	No
Treat14	Treat14 did not respond to the initial emails, but during follow-up telephone contact they advised sending an email to the training department. Further attempts to make contact received no reply.	No
Treat15	No response following repeated attempts to make contact.	No

8.3.3.2 Substance misuse workers: Quantitative sampling strategy

Third-sector SMW are without national role specifications and without a sampling frame. The NDTMS reports that were used to identify organisations providing addiction treatment identified 275 different organisations providing addiction treatment services in England. To create a sampling frame each organisation would require staffing data from each provider. Even assuming that an attempt to gather these data would yield a 100% response rate it is unlikely that organisations would provide staff lists when such information is both confidential and commercially sensitive. Indeed, the recruited organisations were reluctant to distribute staffing lists outside of their organisations and lacked the staff resources and specific knowledge of individual staff to easily identify SMW who had routine contact with service users.

Recruitment was arranged so that those provider organisations sent a recruitment email to all staff, along with instructions that only staff with regular contact with service users should complete the survey. These recruitment emails were sent from gatekeeper organisations to minimise pressure to participate from the researcher. Therefore, the sampling strategy for the survey was self-selecting from all staff working in participating organisations.

The self-selecting nature introduces potential bias to the participant sample. SMW with less time to spare, those not interested in completing surveys and those not interested in research might have been less likely to respond to the recruitment email. The response rate may have varied between services too, with the pressure from managers, area managers or differences in working culture influencing completion of the survey. The response rate varied between organisations often reflecting the number of times the recruitment email was distributed and whether managers were asked to encourage staff participation. In one case the recruitment request was placed in a staff newsletter rather than in a specific email.

Recruitment happened online (through email and then via the online survey) and this introduced another bias in the sample. SMW who were uncomfortable with online technology could be less likely to respond than staff who were more familiar with, and who had better access to technology. In Roger's Diffusion of Innovation (DOI), people were identified as innovators, early adopters, late majority and laggards (Rogers, 2003) with innovators and early adopters being quicker to adopt new technologies. The biases that the online and self-selecting nature of the sampling strategy introduced to the research would potentially favour people who were more likely to use online resources and who might therefore (as innovators and early adopters) be the initial target of online or dissemination resources. However, the bias remained a consideration during analysis and is a limiting factor on the generalisability of the findings. To check for this and other biases, the data from the present study were compared to the demographic characteristics of other studies involving the third-sector SMW (described in Chapter 7) to assess the extent to which the sample for the present study might differ from other samples of similar populations. No incentives were offered for participation in this study.

The target sample for the online survey was 200. This would give sufficient power to measure small differences in training needs when compared to subgroups as identified in a latent class analysis (LCA). This number would also provide the largest research-based survey of this population.

8.3.3.3 Substance misuse workers: Qualitative sampling strategy

Participants for the interviews were also self-selecting, with the majority recruited from the survey sample, and some recruited through a subsequent snowballing strategy. Each participant completing the survey was asked to tick a box if they consented to being approached for an interview. The resulting list of consenting participants was then stratified according to gender, length of time working in the sector (over or under three years) and digital literacy score (over or under mean digital literacy score) (Table 8). This was done to ensure that a wide range of experiences was represented in the interview data.

Table 8

Table 8: Stratified categories used for interview recruitment

Group	Gender	Time in sector	Digital literacy score
1	Male	Over three years	Over mean
2	Male	Over three years	Under mean
3	Male	Under three years	Over mean

4	Male	Under three years	Under mean
5	Female	Over three years	Over mean
6	Female	Over three years	Under mean
7	Female	Under three years	Over mean
8	Female	Under three years	Under mean

This strategy carries with it the same limitations as those of the survey in that it was self-selecting and online. However, it was possible to supplement the interview recruitment and diminish some of those limitations firstly by stratifying the list of potential participants as described above, and secondly by conducting snowball sampling during field work. Participants identified through the survey who worked within teams were asked if they had colleagues who would be willing to participate in the research interviews. These colleagues were then provided with an information sheet and approached for participation. Ten participants were recruited this way.

The sample size for the worker interviews was 31. This gave sufficient depth to identify the needs and experiences of participants, and matched previous similar studies using comparable methods (Hahn et al., 1999, Knudsen et al., 2013).

8.3.3.4 Key Stakeholders: Sampling strategy

The initial sample size for the KSH interviews was 10, but recruitment continued until 14 interviews had been completed because the emerging data merited further investigation because of the range of roles, and therefore perspectives that these interviews elicited. KSH Participants were contacted individually when identified by gatekeeper organisations or other recommendations. They were contacted by email and provided with an information sheet before arranging a mutually convenient time to conduct the interview. Snowballing sampling was also used during this recruitment process with some KSH recommending that the researcher speak to a colleague who was then approached in the same way. Just four KSH who were approached declined to be interviewed. KSH were also not provided with incentives for participation in the study.

8.4 Tools and data collection

8.4.1 The online survey

The online survey used validated tools and standardised questions where they were available. It comprised 34-items and was hosted online by Online Surveys (at the time of the survey it was called

Bristol Online Surveys) (Online Surveys, 2018). The survey was developed to meet the aims of the study as defined in Chapter 7. UK guidance on demographic questions was taken from the Office for National Statistics (ONS), the Equality and Human Rights Commission and Ofcom (Office for National Statistics, 2012, Office for National Statistics, 2015a, Ofcom, 2015, Equality and Human Rights Commission, 2012). Where validated tools were not available, questions published by studies published in peer-reviewed journals were used. The survey was piloted and changes to the wording were made along with removal of some questions to reduce the time taken to complete the survey.

The online survey was piloted by two addictions treatment workers and two researchers with survey design experience and one gatekeeper. Survey results from piloting were not included in the final analysis.

Several items were reworded to improve clarity. For example, the term 'e-learning' was changed to include all forms of online learning. An option to select 'I prefer not to say' was added to demographic characteristics questions, where drop-down menus were also added from which participants could select responses. Confusing instructions were changed so that instructions that participants could 'select over eight responses' were re-phrased to 'select all that apply'. The Welcome Page was amended to inform participants of the estimated length of the survey. Finally, the length of the survey was reduced to make it less onerous for participants. None of the changes were substantive and none of the wording used by established tools was changed. The items included in the survey are listed in here in the order that they appeared in the online survey along with a note of which objective they meet. The full survey as it appeared can be found in Appendix I.

8.4.1.1 Demographic and educational characteristics (Objective 1)

8.4.1.1.1 Age

The age item was designed using parameters suggested by the ONS (Office for National Statistics, 2015a). The upper age band of 75+ was removed to reflect the working age of participants. Instead a band of 65+ was included so that anyone still working who was above the UK retirement age would still be included. The question text was "What is your age in years" participants selected from the following options: "16-20", "21-30", "31-40", "41-50", "51-65", "65+"

8.4.1.1.2 Gender

The question was designed using published guidance from the Equality and Human Rights Commission (Equality and Human Rights Commission, 2012). The guidance offered a range of

possible questions, of which a brief measure was selected to minimise survey length. The question text was “At birth, were you described as…”, participants could select from the following options: “Male”, “Female”, “Intersex”, “I prefer not to say”.

8.4.1.1.3 Ethnicity

This question followed ONS guidance (Office for National Statistics, 2015b) and included an “other” option for people who did not identify with any of the categories presented. The question was presented using a range of drop-down menus which were added following piloting to make it easier to use. The question text was “What is your ethnic group? Choose one option that best describes your ethnic group or background”. Participants could select from the following options: “White: British”, “White: Irish”, “White: Any other White background”, “Mixed: White and Black Caribbean”, “Mixed: White and Black African”, “Mixed: White and Asian”, “Mixed: Any other mixed background”, “Asian / Asian British: Indian”, “Asian / Asian British: Pakistani”, “Asian / Asian British: Bangladeshi”, “Asian / Asian British: Any other Asian Background”, “Black / Black British: Caribbean”, “Black / Black British: African”, “Black / Black British: Any other Black background”, “Chinese”, “Any other ethnic background”

8.4.1.1.4 Level of formal education

This question was informed by ONS guidance on measuring education (Office for National Statistics, 2015a). The wording of the question was written by the researcher (wording is not specified in the ONS guidance). Following piloting, “Diploma” and “Postgraduate” categories were added so that qualifications relevant to this workforce could be captured such as a Diploma in Health and Social Care and MSc in Addiction Sciences. The question text was “Which of the following best describes your level of formal education?”. Participants could select from the following options: “No qualification”, “GCSEs grades A*-C or equivalent”, “A Level or equivalent”, “Diploma or equivalent”, “Degree or equivalent”, “Post graduate degree or equivalent”, “Other qualifications”, “Don't know”

8.4.1.1.5 Addiction-specific qualification

This question was the researcher’s own and was designed to identify how many participants had qualifications that were directly related to their work in addiction treatment. The question text was “Do you have any qualifications that relate to addiction work (e.g. NVQ in health and social care,

counselling etc.)?", participants could select either "Yes" or "No". Those participants choosing "Yes" were asked to specify what that qualification was.

8.4.1.2 Working characteristics (Objective 2)

8.4.1.2.1 Length of time working in the sector

This question was asked to identify working experience as a factor that would influence the amount of training they had received and the types of training they might need. The question design was the researcher's own. The question text was "To the nearest year, how long have you worked in substance misuse treatment services?". Responses were free-text and not predefined.

8.4.1.2.2 Length of time working in current job

This question was asked to identify the levels of experience in specific jobs and to compare with the time in sector to assess movement among different roles within the sector. The question design was the researcher's own, the question text was "To the nearest year, how long have you worked in your current job?". Responses were free-text.

8.4.1.2.3 Experience of transfer of undertakings (protection of earnings)

This question was asked because of evidence that recommissioning services can act as a barrier to continuity of training (Advisory Council on the Misuse of Drugs (ACMD), 2017). The question has not been asked of the substance misuse workforce before; therefore, the design of the question was the researcher's own. The question text was "Have you ever worked in a service that has been recommissioned or been subject to TUPE? (Transfer under protection of earnings)". Participants could select "Yes", "No" or "Don't know". Those selecting "Yes" were asked to state how many times using a free-text box.

8.4.1.2.4 Job role

This question asked about treatment that staff provided as part of their role. This list of options was taken from the NDTMS core dataset M (Public Health England, 2015). At the time of the survey development (2016) dataset M was the current version used by NDTMS and treatment services. These items were chosen because all treatment activity is recorded on the NDTMS dataset, meaning that data would be comparable with routine service provision monitoring.

This question was designed to identify whether the training needs and characteristics identified elsewhere within the survey varied according to job role. The question text was “Which of the following do you provide as part of your role? (tick all that apply)”. Participants could select as many options as they wished from the following list: “Prescribing medication”, “Motivational interventions (e.g. MI and motivational enhancement therapy)”, “Contingency Management (using a system of reinforcement or incentives to motivate behaviour change)”, “Family and social network interventions (e.g. social behaviour and network therapy (SBNT), community reinforcement approach (CRA), Behavioural Couples Therapy (BCT) & formal family therapy)”, “Cognitive and behavioural based relapse prevention interventions (e.g. CBT based relapse prevention)”, “Psychological interventions for co-existing mental health problems (as registered with a relevant professional / regulatory body)”, “Psychodynamic therapies (as registered with a relevant professional / regulatory body)”, “12-step work”, “Counselling – BACP accredited”, “Peer support involvement”, “Facilitated access to Mutual Aid”, “Family support”, “Parenting”, “Housing support”, “Employment support”, “Education and training support”, “Supported work projects (such as referral to a supported, paid employment service)”, “Recovery check-ups (checking up on recovery progress, lapses and need for further signposting)”, “Complementary therapies”, “Other”. Participants selecting “Other” were asked to specify using a free-text entry box.

8.4.1.2.5 Caseload

This question was the researcher’s own design and was included because carrying a caseload, and caseload size may change the education and training needs of staff and is central to understanding the working characteristics of participants. The question text was “Do you manage a caseload?”. Participants could select “No – I do not manage a caseload” or “Yes”. Those selecting “Yes” were asked “… approximately how many people are on your caseload?” which was entered in a free-text box.

8.4.1.3 Current training experiences (Objective 3)

8.4.1.3.1 Last piece of training

This question was used to identify recent training experiences. It was also designed so that participants could focus on one piece of training for quality assessment purposes. The wording was the researcher’s own. The question text was “What was the last piece of work related training that you attended?”. Responses were free-text.

8.4.1.3.2 Quality of the last piece of training

Participants were asked to rate that last piece of training from 1 to 10. The question text was "On a scale of 1-10 how would you rate the quality of this training?". Participants could select a number from a drop-down menu.

8.4.1.3.3 Relevance of the last piece of training

The question text was "Have you been able to use the knowledge and skills from your last piece of training in your current job?". Participants could choose from "No", "Yes" or "N/A".

8.4.1.4 Training needs (Objective 4)

8.4.1.4.1 Plans to study

Planned study helped identify training or education that the workforce considered desirable. This question also provided information about people's "intention to train" which is, according to the theory of planned behaviour, a strong indicator of whether people will actually train, thus linking with the TAM. The question text was "Do you plan to undertake any study or training related to your job in the next 12 months? (please include study you may have already started)", participants could select from "No" or "Yes". Those selecting "Yes" were asked to specify using a free-text box.

8.4.1.4.2 Plans to gain skills

Planned skills development was intended to identify areas where participants intended to gain skills that might not be considered appropriate for formal study. The question text was "In the next two years, are there any areas related to your job where you would like to gain skills or knowledge? (e.g. in relation to specific therapies, complex needs clients, co-morbidity, management, clinical supervision)". Participants could select from "No" or "Yes", those selecting "Yes" were asked to specify using a free-text box.

8.4.1.4.3 Preferred learning methods

This item was included to highlight current popular methods of training and to identify which learning methods influence the ability of SMW to access training. The list was taken from the National Treatment Agency (NTA) staff development toolkit (National Treatment Agency, 2006) and

was edited to include different types of online learning in order to bring the list up to date. This question wording was the researcher's own. The question text was "What learning methods do you prefer to gain the skills and knowledge you need? (tick all that apply)". Participants could select from the following list: "External training courses", "Internal training courses", "Working along more experienced colleagues", "Open and flexible learning programmes (e.g. videos, books, CD-ROMs etc.)", "Online learning (e-learning, virtual classrooms, webinars, MOOCs, social networking etc.)", "Mentoring", "Action learning (groups working to solve specific problems)", "Job rotations and secondments", "Project work (working on a specific project with defined objectives)", "Attendance at conferences or seminars", "Other". Participants selecting "Other" were asked to specify using a free-text box.

8.4.1.4.4 Job intention in the next two years

This was the researcher's own question. It was designed to identify the needs, motivation and intentions of the workforce as highlighted by the theory of planned behaviour and linked to the TAM. The career intentions of workers will also help identify education and training needs that are associated with career progression. The question text was "Over the next two years, do you intend to do any of the following? (tick all that apply)". Participants could select from the following list: "Stay in current position", "Seek a promotion within your current organisation", "Seek a different position in your current organisation", "Seek a position in another voluntary / third-sector substance misuse organisation", "Seek a position in an NHS substance misuse service", "Leave the substance misuse sector", "Undertake full time study", "Take maternity leave", "Retire", "Other". Participants selecting "Other" were asked to specify using a free-text box.

8.4.1.4.5 Areas of interest

This was designed following a training needs assessment of social workers in substance misuse settings by Hall and colleagues in 2000 (Hall et al., 2000). This was used to identify priorities and training needs by area of work. The Hall study provides the most useful comparison which is a testament to the state of the sector and paucity of research on the substance misuse workforce. The question text was "Using the following scale, please indicate your interest in participating in any kind of training activity (including face-to-face and online) in each of the following areas:" For each area participants could choose one of five options on a Likert scale that were labelled as follows: "1 No interest", "2 Very little interest", "3 Moderate interest", "4 Considerable interest", "5 Maximum interest". The areas were "Theories and concepts", "Models and formulations", "Detoxification",

"Assessment techniques", "Treatment process activities", "Intervention techniques", "Interpersonal therapeutic skills", "Specific therapeutic activities", "Administrative skills", "Advanced clinical techniques", "Dual Diagnosis" and "Special populations".

8.4.1.4.6 Training on specific subjects

This was the researcher's own question and was designed to identify training need in specific areas related to addiction treatment and research. The question text was "How much training of any kind (including face-to-face and online) have you had on the following topics?". Topics included "Hepatitis", "Domestic abuse", "Education training and employment", "Novel psychoactive substances", "Psycho-stimulants (such as methamphetamine)", "Naloxone for overdose prevention", Participants could select one of four options on a Likert scale comprising "No training", "Some training (but would like more)", "Sufficient training", "N/A (not relevant or not wanted)".

8.4.1.5 Barriers and facilitators to accessing training (Objective 6)

8.4.1.5.1 Things preventing attendance at training

This was taken from the same survey (Hall et al., 2000) and is designed to identify common barriers and facilitators to accessing training. The question text was "If you have been previously unable to attend training in the past, please indicate how much you agree with the following statements about what prevented you from accessing training:". Participants could choose from a Likert scale with the following five options "-2 Completely disagree", "-1 Somewhat disagree", "0 Uncertain", "1 Somewhat agree", "2 Completely agree". The reasons that participants responded to were as follows: "I did not know what training I needed", "I had no interest in participating in training", "I have completed all the training my work requires", "There are inadequate financial resources", "I lacked information about training programme availability", "The locations of training activities were inconvenient", "Previous training experiences were a waste of time", "I have too many other time commitments", "I have too many other work-related commitments" and "The type of training that interested me was not available"

8.4.1.5.2 Preferred learning methods

Item described above (section 8.4.1.4.3)

8.4.1.5.3 Access to the internet at work

This question was designed by the researcher and designed to identify some of the wider structural factors that affect how SMW access the internet and online resources whilst at work. The question text was "Which of the following best describes your access to the internet at work?". Participants could select one option from the following list: "I have my own computer with full internet access", "I share my desk / computer with other staff (hotdesking)", "I have access to the internet but the connection is slow and /or unreliable", "I have partial access to the internet (sites are restricted / no sound / no videos)" and "I have no access to a computer or the internet at work".

8.4.1.6 Motivation of substance misuse workers to access training (Objective 7)

8.4.1.6.1 Plans to study

Item described above (Section 8.4.1.4.1)

8.4.1.6.2 Plans to gain skills

Item described above (Section 8.4.1.4.2)

8.4.1.6.3 Job intention in the next two years

Item described above (Section 8.4.1.4.4)

8.4.1.6.4 Areas of interest

Item described above (Section 8.4.1.4.5)

8.4.1.7 Access to internet technology (Objective 9)

8.4.1.7.1 What do you regularly use to access the internet

This question was taken from the Ofcom Adults' media use and attitudes report 2015 and was used to identify what technologies were used to access online resources. The question text was "Which of the following do you use on a regular basis? (tick all that apply)". Participants could select from the following list: "Laptop Netbook", "Smart-phone", "Tablet", "Desktop Computer" "Games Console (connected to TV)", "Smart TV", "e-book Reader", "Portable Media Player", "Portable Games player", "Wearable Tech" and "I use none of these on a regular basis".

8.4.1.7.2 Access to the internet at work

Item described above (Section 8.4.1.5.3)

8.4.1.7.3 Hours online at work

This was taken from the Ofcom adults media use and attitudes report 2015 (Ofcom, 2015) and was used to identify the extent to which staff use online resources in their work life. The question text was "How many hours in a typical day do you use the internet at your workplace?". Responses were typed into a free-text box.

8.4.1.7.4 Hours online at home

This was taken from the Ofcom adults media use and attitudes report 2015 (Ofcom, 2015) and was used to identify the extent to which staff use online resources in their personal life. The question text was "On a typical work day how many hours do you use the internet at home (for any reason including personal or work reasons)?" Responses were free-text.

8.4.1.8 Commonly used online resources (Objective 10)

8.4.1.8.1 Addiction treatment websites you use regularly

Item described above (Section 8.4.1.8.1)

8.4.1.9 Confidence and competence of using internet technologies (Objective 11)

8.4.1.9.1 Hours online at work

Item described above (Section 8.4.1.7.3)

8.4.1.9.2 Hours online at home

Item described above (Section 8.4.1.7.4)

8.4.1.9.3 Digital literacy scale

This used a tool developed by Hargittai (Hargittai, 2005). It was included to identify the confidence and competence of participants' use of internet technologies. The question text was "How familiar are you with the following computer and internet-related terms? Please choose a number between

1 and 5 where 1 represents "no understanding" and 5 represents "full understanding" of the item." Responses were on a Likert scale as described in the question with the following options: "No understanding", "Little", "Some", "Good" and "Full". The items were listed in the following order: "Favourites", "Bookmark", "Advanced search", "Firewall", "JPG", "PDF", "Preferences setting", "Spyware", "Weblog", "Newsgroup", "Wiki", "Podcasting", "Phishing", "Malware" and "RSS".

8.4.2 Substance misuse workers: Interview topic guide

As with the survey items, the topic guide for the interviews was designed to meet the aims and objectives of the research. The topic guide for SMW participants was piloted using SMW recruited using convenience sampling. Following piloting, some questions were reworded to improve clarity, and examples were added to help participants understand the context of some questions. For example, the question about other benefits from training was confusing during piloting, so it was changed to include examples of "confidence or teambuilding". The order of the topic guide was also changed to group similar questions together. Despite these minor changes, few items were changed following piloting. With the consent of the pilot interviewees, the pilot interview data were then included in the analysis. The full SMW topic guide can be found in Appendix II.

8.4.2.1 Demographic characteristics and education (Objective 1)

The interview started with demographic characteristics and educational experiences of participants. These questions were also used to establish rapport between the interviewer and the participant. Most participants were interviewed during their working day, so this introductory stage allowed them to separate the interview from their immediate experiences and to think more widely about their overall experiences and needs.

8.4.2.2 Work experiences (Objective 2)

The topic guide then covered participants' experiences at work, including regular tasks, a typical day and their length of working experience. They were asked what had first motivated them to work in their role to help identify the kinds of motivations people have to work in addiction treatment services. Also, within this section were questions about recommissioning and Transfer of Employment - Protection of Earnings (TUPE). A series of questions on how their work, work with service users and careers could be improved were designed to identify participants' needs and

motivations that they might consider separate from training but that might nonetheless help inform the design of training resources.

8.4.2.3 Training experiences (Objective 3)

The interviews then covered participants' current experiences of training including the characteristics of that training as well as what they have enjoyed and what they have not enjoyed. The research sought to understand the experiences of SMW rather than simply identify and report those experiences, therefore the topic guide included prompts about what made training courses more (and less) enjoyable. Participants were then asked about the different types of training available for administrative and therapeutic work. Prompts were used to ensured that organisational, service specific, personal and managerial factors were considered.

Participants were asked about their experiences of online learning. This was included towards the end of the interview to avoid narrowing the focus of participants. The purpose of this research is not to ask SMW about online learning and how to improve it, rather to conduct a formative assessment of the wider needs and contextual issues that would inform the design of high quality online learning. It was important to ask about existing online training resources and experiences. Had this been included at the beginning of the interview, it would risk framing all answers within the confines and preconceptions of existing online learning resources.

8.4.2.4 Training needs (Objective 4)

The questions about overall training needs asked participants what skills they thought were most important for new staff with little or no addiction treatment experience. This encouraged participants to separate the needs of their job from their own personal needs increasing the generalisability of the data. They were also asked what training would be most useful for more experienced members of staff. Participants were prompted to consider therapeutic and administrative elements to their job. They were asked about training that they wanted to attend but that was not available. They were also asked about the use of, and access to resources based on research and EBP.

8.4.2.5 Barriers and facilitators to attending training (Objective 6)

Participants were asked about factors that made it difficult for them to access and attend training as well as factors that made it easier for them to attend training. They were asked how they booked

training and how manager approval affected their access. They were asked about any disruption to training that resulted from recommissioning. They were finally asked whether there were any other external factors that affected when and how often then attended training.

8.4.2.6 Motivation to attend training (Objective 7)

Participants were asked about training that they would like to attend and why they were motivated towards these training subjects or areas. This question was asked of administrative-based training and therapeutic-based training. They were asked about having attended training they did not want to participate in and what factors had contributed to their attendance. They were also asked about training they would find most useful for their personal interest, for their career and for other reasons that would be specific to them.

8.4.2.7 Evidence-based practice (Objective 8)

The interviews then focused on EBP and the extent to which it was considered relevant to participants' work. Participants were asked how they accessed and used information on research and EBP, and how this could be made easier. They were asked about their use of clinical guidelines and forms of manualised therapies. They were asked whether and how these resources were accessed, used and delivered to service users.

8.4.2.8 Internet technology (Objective 9)

The interviews then enquired about the participants' use of internet technology, and about how this changed according to time and location. They were asked about frustrating online experiences and were asked why they found some experiences frustrating or enjoyable. This enabled the data to report more than a description of frustrating experiences and to identify the mechanisms and motivations behind frustrating online experiences thus enabling greater transferability of findings.

8.4.2.9 Types of online resources commonly used (Objective 10)

Participants were asked what they most commonly used the internet for whilst at work and at home. They were asked to describe specific websites that they used in each context and why they used those websites. They were asked to describe their perceived reasons for satisfying and frustrating online experiences.

8.4.2.10 Digital literacy (Objective 11)

A brief question about how confident and competent participants felt about using the internet for a range of purposes was included. These purposes included booking holidays, sending emails and shopping.

8.4.2.11 Summing up and value to training

The final questions were designed to capture data missed by previous questions. Participants were asked about any wider structural factors not already mentioned that affected their internet use. The final question asked participants what value they thought training had beyond learning and skills development. Participants were asked if there was anything else related to the interview topics that they wished to add, before being thanked for their time, informed that the audio recorder was switched off, and that the interview was finished.

8.4.3 Key Stakeholders: Interview topic guide

The topic guide for the KSH interviews was shorter than the one used for staff interviews. This was because the majority of the data sought was from third-sector SMW themselves, with the KSH interviews being used to add perspective and a wider context. However, some of the wider contexts would elicit more detailed explanations (for example historical reasons for the lack of a registered profession), and so the interviews themselves would last a similar amount of time.

The KSH interview topic guide was not piloted because participants for these interviews were drawn from a smaller group of people and there were fewer opportunities for piloting. Furthermore, the heterogeneous nature of participants would mean that changes made following a pilot interview with a policy maker would not necessarily transfer to interviews with a training manager. The full KSH topic guide can be found in Appendix III.

8.4.3.1 Work characteristics (Objective 2)

The KSH interviews started with questions about their job title and typical working tasks. The KSH were drawn from different types of work so establishing their work and role would help understand the perspective they bought to the data. These early, practical and descriptive questions also helped

the interviewer to establish a rapport with participants and to identify working contexts that could be used to frame later questions in a way that would be appropriate to their experience.

KSH were asked about regular contact they had with SMW to try and identify the extent to which needs of SMW are surveyed informally within the third-sector. It is possible that SMW are highly surveyed and that a great deal is known about their preferences and training needs, and that this knowledge is absent only in the academic literature. They were also asked about their experience of recommissioning and TUPE.

8.4.3.2 Own experiences of training (Objective 3)

KSH were asked about their own experiences of training as a participant and as a provider, and their perceptions of what makes effective or successful training. They were also asked about how EBP influenced training provision. This question helped the interviewer to understand the KSH perceptions and working history, and how previous experiences might inform their views on current training. The KSH were also asked about their experiences of online learning from a provider or a manager's perspective.

8.4.3.3 Training needs in the sector (Objective 5)

KSH were asked about their perspectives on SMW training needs, existing training and what were considered priorities. These questions used prompts to enquire about the reasons for these perspectives so that the data could move beyond a list of needs to provide in-depth and transferrable analyses. During this section KSH were asked about training that would be important for a new worker, a more experienced worker and for third-sector addiction treatment in general. They were also asked about training that would be useful but that was rarely available or rarely accessed by staff.

KSH participants were then asked about why SMW training was important for their role. Prompts were used to identify interests based on the intrinsic value of training and education, those based on improved treatment quality and those based on business-related issues. This question established motivations and drivers for training and education among KSH.

8.4.3.4 Barriers and facilitators to training (Objective 6)

KSH were asked about barriers and facilitators that they thought SMW experienced when trying to access training. These items will compare directly with the barriers and facilitators identified by SMW participants and will help indicate which elements are universal, and whether perceived barriers and facilitators to training differ between SMW and KSH participants. KSH were also asked why they thought there was no single mandatory qualification for SMW in addiction treatment.

8.4.3.5 The motivation of substance misuse workers to access training (Objective 7)

KSH were asked about courses that were popular with SMW, and what kinds of courses were routinely well attended. They were also asked about courses that were not popular and that few SMW would enrol on. They were asked about how they might motivate staff to attend training and what methods they might use to encourage staff to complete unpopular training.

8.4.3.6 Evidence-based practice (Objective 8)

KSH were asked how the accessed, assessed and used information on research and EBP. They were asked specifically about their use of clinical guidelines and policy documents. As with the SMW interviews they were asked about their perceived importance of EBP. There were also questions about the what constitutes mandatory training and how research and EBP influences that selection as well as the influence that policy and regulations have on the use of research and EBP.

8.4.3.7 Wider structural factors, value and close

The interviews finished asking about wider structural factors that might influence access to training so that anything not yet mentioned could be identified. They were also asked the same question as SMW about the value of staff training beyond skills and knowledge. They were thanked for their time and the audio recorder was turned off and the interview was finished.

8.4.4 How research tools were accessed, and the disposition of participants

8.4.4.1 Substance misuse workers: Survey

The survey was designed to be completed in the participants' workplaces. However, it was not possible to determine the location that the participants would use to complete the survey as it could

be accessed from anywhere with an internet connection. The surveys were competed online but the precise context in which they were completed cannot be determined.

8.4.4.2 Substance misuse workers: Interviews

The SMW interviews were conducted in participants' workplaces where possible. This was the case for 25 interviews where private clinical or key-working rooms were used to conduct the interviews. There were cases where this was not possible; some participants worked in offices with restricted access (e.g. within a prison) or as outreach workers no fixed office. In these instances, alternative venues were identified including local cafés for four interviews, and the participant's home for two.

The nature of the interviews was altered in these venues. Cafés were less private than key-working rooms, and this had the potential to inhibit responses from participants. Conversely, a more public setting may have enabled some participants to talk more openly about work issues when they were physically further away from colleagues and managers. In all cases the interviewer worked to help participants feel comfortable and assured all participants of the confidential nature of the interviews. No participants displayed any signs of visible discomfort with the location or setting of their interview. The participants interviewed in public spaces seemed open and willing to discuss their work, training and contexts with equal candour as those interviewed in their workplace.

The disposition of participants was generally positive. Participants were keen to talk about training, perhaps a result of the self-selecting nature of the sample. Many were openly critical as well as complimentary of their employers and at no times appeared restricted in the responses they provided.

8.4.4.3 Key stakeholder interviews

Eleven KSH interviews were conducted at the participant's place of work with one KSH interview conducted in a café and one conducted over the telephone.

Conducting an interview by telephone made it more difficult to establish a rapport and to respond to physical gestures. The participant interviewed in this way was a gatekeeper who the researcher had liaised with regularly during recruitment over the previous year and with whom the research had built a good rapport. During the interview communication was occasionally compromised due to the telephone setting, however misunderstandings were clarified to ensure this did not compromise the accuracy of the data. The participant engaged with all the questions without any apparent restraint.

On one occasion a KSH appeared to be defensive about the actions of the organisation in which they worked. This participant repeatedly answered questions by discussing initiatives within the

organisation. In this instance the interview provided valuable data about ways in which organisations plan to address potential problems despite doing little to add detail to the descriptions of those problems.

Two other KSH interviewees were restrained in their description of workforce initiatives where they felt those initiatives were commercially sensitive. In these cases, they were both open about the reasons for their non-disclosure and happy to talk on a more general level about the issues raised. No other restrictions on the KSH data were observed by the researcher.

8.5 Analyses

8.5.1 Quantitative data analysis

The survey data were analysed using descriptive statistics, chi square, LCA and One-way ANOVA.

Data were checked for duplicate entries, missing data and outliers. The data were then were imported into SPSS Version 23.0 directly from Online Surveys (at that time called Bristol Online Surveys) (Online Surveys, 2018) and so data were not entered by researchers and did not require double entry. Free-text entries were re-coded into numeric variables where relevant (e.g. length of time working in addiction treatment services). The education, ethnicity, working experience, codes were re-coded into binary or categorical variables for analysis. Work characteristics data were used in an LCA to identify three groups of participants based on their working characteristics as described below. Scale variables were analysed for normal distribution. Percentages were reported for all other variables. T-tests were used to compare means and a One-way ANOVA was conducted to compare the effect of latent class groups and experience in addiction treatment on digital literacy. 'Other' options were grouped where possible and reported.

8.5.1.1 Latent class analysis

LCA is a statistical model for identifying latent classes within categorical data (Lanza and Rhoades, 2013), with subgroups identified by their ability to explain heterogeneity within a sample. An LCA suggests predominant groupings that best fit the data according to a predefined number of subgroups (assigned by the researcher) and can therefore be used to generate hypotheses relating to subgroup membership for participants. Having identified subgroups, a LCA will then assign the probability of individual cases belonging to each subgroup, a process known as assigning posterior probabilities (Lanza et al., 2003). The statistical analysis software R (R Core Team, 2013) and a

package poLCA (Linzer and Lewis, 2009) developed for conducting LCA were used for the present study.

The process of selecting which of the predefined number of subgroup analyses best fits the data is known as identifying the 'relative model fit'. An LCA programme searches iteratively for a model that best fits the data within a predefined number of latent classes. This iterative process works by identifying increasingly 'better' models and by converging on a model that best fits the data. To counter a possibility that LCA will converge on an under identified model (Lanza et al., 2003), an LCA programme is set to run a number of times, each time starting at a random starting point. A model is said to be a good fit if the programme converges on the same model over 80% of times (Lanza and Rhoades, 2013). If the programme converges on multiple models, this indicates that a model for that specific number of latent classes cannot be identified.

An Akaike information criterion (AIC) and Bayesian information criterion (BIC), are used to compare how well a model 'fits' the data to which it is applied. These quality assessment tools assume a loss of information in all but an exact model and report the extent to which information is lost when applying an inexact model to data. They are used in an LCA to compare models in order to identify a model that best fits the data.

The present study used an LCA to identify subgroups of SMW according to their working characteristics. It was decided to define the working roles of SMW using classes identified by the LCA to avoid defining participants according to assumptions about working roles that were not based on evidence. The NDTMS data items (see 8.4.1.2.4) were used because these are standardised reporting items in third-sector addiction treatment in England and so were less prone to regional variations in how SMW interpreted their meaning. The data on whether participants carried a caseload were also used. There were initially 16 variables in this data set. Variables were combined according to the NDTMS guidance into three groups: prescribing, psychosocial interventions and recovery interventions. These variables plus the caseload variable made four items for inclusion in the LCA.

The variables for prescribing and carrying a caseload were binary with '0' representing not prescribing or carrying a caseload, and '1' representing prescribing and carrying a caseload. When the variables for psychosocial and recovery work were first created it was apparent that most SMW in the sample delivered at least one element of psychosocial or recovery work. The cut-off point of two or fewer recovery and two or fewer psychosocial interventions was decided to represent those participants delivering low levels of psychosocial or recovery work compared to those delivering high levels of those interventions. The final variables included in the LCA are described in Table 9.

Table 9: Variables used in the latent class analysis

Variable	Level	Meaning
Prescribing	0	Does not provide prescribing
	1	Provides prescribing
Caseload	0	Does not carry a caseload
	1	Carries a caseload
Psychosocial	0	Two or fewer types of psychosocial intervention
	1	More than two types of psychosocial intervention
Recovery	0	Two or fewer types of recovery work
	1	More than two types of recovery work

These four binary variables were created in R and LCA were run to identify 1, 2, 3, 4, and 5 subgroups. Each analysis was run from 100 random start values for a maximum of 1,000 iterations for each value to ensure the identification of absolute model fit. The AIC and BIC criteria were used to compare which of the identified models with different numbers of latent classes best fitted the data. The profiles of classes defined by the LCA were also assessed for distinctness, parsimony and ease of interpretation.

The identified subgroups were used to assess whether demographic and educational characteristics, training interests and needs, preferred learning methods and internet access at work differed across subgroups.

Associations between variables were identified using tables with Chi-square analysis, with statistical significance reported using p-values. Continuous variables were described using mean and standard deviation where normally distributed, and by using median and inter-quartile ranges where they were not normally distributed.

8.5.2 Qualitative data coding and analyses

Iterative categorisation (IC) is a multi-stage process of organising and analysing qualitative data and was chosen for this study because it met the needs of the study design (Morgan, 2007, Spencer and Ritchie, 2002, Creswell, 1994) by identifying themes within the data in a transparent and methodologically rigorous way. It is a highly replicable method of line-by-line qualitative data analysis that limits the potential for bias resulting from the creative interpretation of results by

researchers (Neale, 2016). All the theories and models used as the basis for this research (see Chapter 7) consider knowledge identification in an epistemologically pragmatic way, that is, they prioritise methods that will answer research questions and meet the aims of the research. In the present study the aim and objectives prioritised identifying the knowledge, perceptions and motivations of SMW and KSH. IC meets these aims and objectives through detailed, rigorous and replicable methods. Therefore, IC was chosen as a way of organising, interpreting and analysing data.

8.5.2.1 Coding

Each transcript was given an identification code that identified that participant's gender, length of experience as a SMW and digital literacy. Gender was recorded as M for 'Male', F for 'Female', I for 'Intersex' and P for 'I prefer not to say'. Experience was recorded as O for over three years' experience as a SMW, and U for under three years' experience. Digital literacy was recorded as H for high digital literacy (defined as above the mean of the survey sample) and L for low digital literacy (defined as below the mean within the survey sample). These initials were followed by a three-digit, unique reference number. For example, a participant who was female, who had worked in addiction treatment for five years and had high levels of digital literacy (and was given the unique number 054) would be labelled FOH 054. This system of labelling allowed the researcher to identify patterns within the data that related to gender, work experience and digital literacy.

The SMW and KSH interviews were transcribed by the researcher and transcripts imported into MaxQDA coding software. The data were then categorised into codes based on the topic guide, with each question on the topic guide corresponding to a code. This process ensures that the coding frame directly relates to the topic guide and therefore the original aims and objectives of the study. Inductive codes were created where themes emerged during data analysis. When multiple participants raised issues that were not covered in the topic guide and therefore coding frame, an inductive code was added so that these themes could also be collected and analysed.

Having created the coding frame, all transcripts were coded. This involved reading the interviews line by line and categorising participant responses to codes in the coding frame. Some sections of an interview were allocated to multiple codes where a response related to multiple themes. Every response in the transcripts was allocated to at least one code except for incidental events (such as where a participant took a telephone call or ordered a cup of tea).

8.5.2.2 Analyses

Analyses started by collating all interview sections categorised to an individual code into a single document. Each section of text within that document was analysed, summarised with the identity of the participant recorded next to that summary and then deleted, with relevant quotes recorded at the bottom of that Word document. Once all statements relating to an individual code had been deleted, the resulting Word document, containing summaries of all the data relating to an individual code, was analysed for themes, divergent responses and explanatory factors. The analysis of those data was then summarised in a brief narrative at the top of each Word document.

This process produced a Word document for each code that contained an overview of the analysis followed by summary statements from the interviews grouped by theme, and a selection of quotes relating to that code. The full collection of analysis documents for all codes was then used to meet the objectives of the study. When multiple documents responded to study objectives, those analyses were compared, contrasted and combined as appropriate. Finally, those study results were contrasted with the existing literature described in Chapter 7.

8.5.2.3 Tools used

The online survey was hosted by Online Surveys (Online Surveys, 2018). Data were initially exported to SPSS Version 23.0 (IBM Corp, 2017) where they were ordered, coded and tidied. They were then exported to R (R Core Team, 2013) for analysis. Interviews were recorded using a Zoom H1 Handy recorder (Zoom, 2018). They were transcribed using Express Scribe software (NCH Software, 2018). The transcripts were coded and analysed using MaxQDA (VERBI Software, 2017), with the final part of IC taking place in Microsoft Word (Microsoft, 2018). Microsoft Excel, Microsoft PowerPoint (Microsoft, 2018) and R (R Core Team, 2013) were used to create charts and tables. References were organised and managed using EndNote (Clarivate Analytics, 2018).

8.6 Ethical considerations

8.6.1 Ethical considerations

Ethical approval was initially sought on 24th November 2015 from King's College London Psychiatry, Nursing and Midwifery Research Ethics Subcommittee. Amendments were required to this first submission. These changes reduced the number of follow-up reminders sent to participants and organisations, explained how participants could contact the researcher and specified the text that gatekeepers would use when distributing recruitment materials. Further detail about the nature of

the survey and interview items was added to the participant information sheet. Full ethical approval was given on 14th April 2016 reference number LRS-15/16-1913. This was initially granted for one year but was later extended to match the lifecycle of the research (RESCM-17/18-1913). Ethical approval will lapse on 14th April 2020.

8.6.2 Minimise harm

The researchers considered the potential for this research to cause harm. The risk for causing harm through research is particularly acute when researching vulnerable populations and participants here (SMW) were not defined as a vulnerable population. This caused the research to be considered low risk by King's College London's Psychiatry, Nursing and Midwifery Research Ethics Committee. As a non-vulnerable population, participants were assumed to have the capacity to give or withhold their consent. A participant information sheet was written so that that participants could make an informed choice about consenting to participate in the research.

8.6.3 Anonymity and confidentiality

All data were anonymised in the thesis and for future publication using pseudonyms. Identifiable information (such as location and service specific details) were also altered in quotes to minimise the potential for identification. KSH job titles were not reported because of the potential for participants to be identified. All participants were informed of the measures taken to ensure anonymity before they gave their consent to participate in interviews.

Secure data storage was arranged in accordance with the data protection act 1998. On 27th April the data storage provisions for the online survey were registered with King's Data Protection Register with reference number DPRF-17/18-6184. On 1st May 2018 the data storage provisions for the staff and KSH interviews were registered with King's Data Protection Register with reference number DPRF-17/18-6187. All data storage procedures were compliant with the requirements of the EU General Data Protection Regulation (GDPR).

8.6.4 Right to withdraw and no coercion

Participants were informed that they could withdraw from the research at any time and that they could withdraw their consent retrospectively up to one month following the interview. This was detailed in the participant information sheet and was verbally explained to all participants. The

information sheet detailed the potential consequences of taking part in the research and how data would be stored. Gatekeepers were used to approach staff for participation in the research to minimise any perceived pressure to participate from the researcher.

8.6.5 Independence of research

The research was funded by King's College London Prize Studentship and independent of any external or business funding or interests.

8.6.6 Consent

Participants were sent an information sheet prior to accessing the survey. Furthermore, a link to the information sheet was predominantly placed on the welcome page of the survey. Participants were then informed that participation implied consent using the following text:

> *"Submission of a completed questionnaire implies consent to participate. This includes consent to processing your personal information for the purposes explained in the information sheet"*

The information sheet stated that they could withdraw their consent retrospectively by contacting the researcher or his supervisors whose contact details were provided.

Participants consented to be approached for interview by responding to an item on the front page of the online survey that read as follows:

> *"At a later date we hope to interview substance misuse workers about training needs, work experiences, and internet use. If you consent to be approached for an interview, please select 'yes'. If you do not wish to be approached for an interview, please select 'no'."*

Final consent for the interviews was confirmed in person by participants signing a consent form. All participants were given a copy of the information sheet in advance and key elements were verbally explained to them. The consent form required participants to initial boxes confirming that they had understood all elements to which they had consented.

Interview participants were informed that they could withdraw consent to use their data up to a month after the interviews.

8.7 Presentation of results

Once the data collection, coding, and analysis were completed, the results were categorised according to the original study objectives and are presented in that order in this thesis. A summary of the data used to meet each objective is presented here in Table 10.

Table 10: Data collection methods used for each research objective

Objective	Data source	Items	Analysis
1: To identify the demographic and educational characteristics of SMW	Survey data (quantitative)	Age, gender, ethnicity, education level, other qualifications, addiction-specific qualifications	Descriptive statistics, chi square to analyse associations between demographic characteristics and membership of subgroups identified by the latent class analysis (LCA) Education was recoded into 'Degree or above' and 'all other education'. This binary variable was used to analyse differences in training needs, preferences and barriers, as well as digital literacy according to education
	SMW interviews (qualitative)	Demographic characteristics and education experiences	Iterative categorisation (IC)
	KSH interviews (qualitative)	None	N/A
2: To identify the working characteristics of the substance misuse workforce	Survey	Job role, job intentions, years' work in the sector, years' work in that job, caseload, caseload number, experience of TUPE, number of times subject to TUPE	Job role and caseload were used as the basis for the latent class analysis (LCA). Descriptive statistics used for other measures Length of work in the sector was recoded into '<2 years', '2-5 years' and '5+ years' following (Aletraris et al., 2015) This categorical variable was used to analyse differences in training needs, preferences and barriers according to working experience
	SMW interviews	Length of work experience and attraction to the sector, working characteristics, experiences of recommissioning and TUPE, stress and 'burn-out'	IC
	KSH interviews	Working background, experiences of recommissioning	IC
3: To identify the range and nature of training currently accessed by the substance misuse workforce	Survey	Last training, rating of last training, ability to use last training in their work	Descriptive statistics
	SMW interviews	Experiences of training, training completed, characteristics of work-based learning, mandatory training, training needs for therapeutic and administrative work, enjoyable and frustrating	IC

Objective	Data source	Items	Analysis
		elements of training, positive and negative experiences of online learning	
	KSH interviews	Experiences of training as a participant and as a facilitator, experiences of online learning	IC
4: To identify the self-reported education and training needs of the substance misuse workforce	Survey	Plans to study and train, subjects and areas of interest for training	Chi-square to analyse differences in training preferences across LCA groups Descriptive statistics
	SMW interviews	Training needs of new staff, therapeutic and administrative training needs, ongoing training needs, the therapeutic relationship, external benefits from training	IC
	KSH interviews	None	N/A
5: To identify the education and training needs of the substance misuse workforce as identified by KSH	Survey	None	N/A
	SMW interviews	None	N/A
	KSH interviews	Training needs of new and experienced SMW for the benefit of service users, SMW and the organisation	IC
6: To identify the barriers and facilitators to training for the substance misuse workforce	Survey	Reasons for non-attendance at training, preferred learning methods, internet access at work	Chi-square to analyse differences in preferred learning methods across LCA groups Descriptive statistics
	SMW interviews	Barriers to training, disruption to training from TUPE, facilitators to training	IC
	KSH interviews	Barriers and facilitators to training provision, the absence of a single mandatory qualification for SMW	IC
7: To identify the motivation for education and training among the substance misuse workforce	Survey	Plans to study, plans to gain skills, job intentions, interest in areas of training	Chi-square to analyse differences in areas of training interest across LCA groups Descriptive statistics

Objective	Data source	Items	Analysis
	SMW interviews	Motivation for education and training, including improved treatment, career goals, personal development	IC
	KSH interviews	Mandatory training, training important for organisations and regulation, perceived staff motivation for training	IC
8: To identify how substance misuse workers access and use information on research and evidence-based practice	Survey	None	None
	SMW interviews	Access to research and evidence-based practice, characteristics of useful resources, use of clinical guidelines, how to search for research and evidence-based practice, peer learning	IC
	KSH interviews	Access to research and evidence-based practice, use of clinical guidelines, barriers and facilitators to research and evidence-based practice, the influence of policy and regulations	IC
9: To identify the technologies used by the substance misuse workforce to access the internet	Survey	What is used to access the internet, internet access at work, hours online at work, hours online at home	Chi-square to analyse differences in computer access at work across LCA groups Descriptive statistics
	SMW interviews	Experiences and use of internet technology, frustrating and positive online experiences	IC
	KSH interviews	None	N/A
10: To identify the types of internet resources commonly used by the substance misuse workforce	Survey	Regular websites, regular SMU websites	Descriptive statistics
	SMW interviews	What the internet is used for at work and at home, experiences of online learning, frustrating and positive online experiences	IC
	KSH interviews	None	IC
11: To identify the confidence and competence of the substance misuse	Survey	Hours spent using the internet at home and at work, digital literacy	Chi-square to analyse differences in digital literacy across LCA groups.

Objective	Data source	Items	Analysis
workforce in using internet technologies			Descriptive statistics
	SMW interviews	Digital literacy and confidence in using the internet	IC
	KSH interviews	None	N/A

9 Results: Demographic, educational and working characteristics of substance misuse workers

This chapter will describe the results related to objectives one and two; and describe the demographic and educational characteristics of survey participants (n=200), substance misuse worker (SMW) interview participants (n=31) and key stakeholder (KSH) interview participants (n=14). This will be followed by a description of the working roles and workplace characteristics relevant to the design of online learning. For each objective, results from the quantitative survey data will be presented first, the SMW qualitative data second and the KSH qualitative data third. First, the chapter will summarise the results from the recruitment process.

9.1 Recruitment results

Following the recruitment process described in Chapter 8, five third-sector organisations were recruited to act as gatekeepers. The distribution and response rates differed between gatekeeper organisations. Each participating organisation was able to provide an estimate of the number of SMW working for them who met inclusion criteria (i.e. those with direct service user contact). Estimated response rates varied between organisations from less than 1% to a quarter of eligible staff (26%). The lowest response rate was received from an organisation that placed a link to the survey in an online newsletter, the highest response rate was achieved by circulating the survey link by email and sending reminders to staff, by email and through managers, to complete the survey. A total of 200 participants were recruited, representing 8% of the estimated number of eligible SMW in participating organisations (Table 11).

Table 11: Survey response rate by organisation

Organisation	Estimated number of SMW meeting inclusion criteria	Distribution	Response *n* (%)	% of study participants
Treat1	800	Link on internal website	2 (0.3)	1.0
Treat2	1,200	Multiple emails plus follow up and management reminders	139 (11.6)	69.5
Treat3	180	Multiple emails and reminders	46 (25.6)	23.0
Treat5	200	One email	5 (2.5)	2.5
Treat9	150	Two emails	8 (5.3)	4.0
Total	2,530		200 (7.9)	100

SMW = Substance misuse workers

Thirty-one SMW were recruited for the qualitative interviews following the methods described in Chapter 8. These 31 interviews produced 23hours and 12minutes of interview data. Interviews lasted for an average of 45minutes; the shortest interview lasted for 26minutes and the longest interview lasted for 1hour and 17minutes.

Ten interview participants were recruited through snowball sampling and 21 recruited from SMW participating in the online survey. The numbers of interview participants for each stratification category (described in section 8.3.3.3) are reported in Table 12. Data on gender and time in sector were available for all interview participants, however digital literacy scores were only available for the 21 participants recruited from the online survey.

Table 12: Interview response rate by stratification characteristic

Stratification characteristic	*n*
Gender *(n=31)*	
Male	7
Female	22
Digital Literacy *(n=21)*	
Over mean	11
Under mean	10
Time in sector *(n=31)*	
Over three years	25
Under three years	6

Interview participants' gender and time working in addictions were similar to survey participants' characteristics and are discussed in more detail in section 9.2.1.1 and 9.3.1.2 respectively. Interview participants' digital literacy scores were evenly split, with around half scoring above and below the survey sample mean.

Fourteen KSH were recruited following the methods described in Chapter 8. The 14 KSH interviews produced 13hours and 12minutes of interview data. The average interview duration was 56minutes. The shortest interview lasted for 30minutes and the longest interview lasted for 1hour and 21minutes.

9.2 Objective 1: To identify demographic and educational characteristics of the substance misuse workforce

The survey collected data on participants' age, gender, ethnicity and educational characteristics. The interview data covered participants' education and addiction-specific qualifications as well as their motivation to study. The demographic and educational characteristics of KSH were not necessary to meet this objective therefore no KSH data were used.

9.2.1 Quantitative survey results

9.2.1.1 Age and gender

The largest age group among survey participants (n=200) was 41 to 50, with 35% of participants represented by this category. Thirty percent were aged over 51, and just 2% aged over 65. One participant was under 20 years old, 12% of participants were aged 21 to 30 and 23% aged 31-40. Two thirds of participants (66%) were female and one third (34%) male with one participant preferring not to say. No participants identified as intersex. Most participants identified as 'White: British' (85%). The second largest response was for 'Black / Black British: Caribbean' and 'White: Any other White background' with 3% each (Table 13).

Table 13: Demographic characteristics of survey participants (n=200)

Demographic characteristic	***n* (%)**
Age	
16-20	1 (0.5)
21-30	23 (11.5)
31-40	47 (23.5)
41-50	69 (34.5)
51-65	56 (28.0)
65+	3 (1.5)
Not reported	1 (0.5)
Gender	
Male	68 (34.0)
Female	131 (65.5)
Intersex	0 (0.0)
I prefer not to say	1 (0.5)
Ethnicity	
White: British	169 (84.5)
White: Irish	3 (1.5)
White: Any other White background	6 (3.0)
Mixed: White and Black Caribbean	3 (1.5)
Mixed: White and Black African	1 (0.5)
Mixed: White and Asian	0 (0.0)
Mixed: Any other mixed background	2 (1.0)
Asian / Asian British: Indian	3 (1.5)
Asian / Asian British: Pakistani	1 (0.5)
Asian / Asian British: Bangladeshi	0 (0.0)
Asian / Asian British: Any other Asian background	1 (0.5)
Black / Black British: Caribbean	6 (3.0)
Black / Black British: African	2 (1.0)
Black / Black British: Any other Black background	0 (0.0)
Chinese	0 (0.0)
Any other ethnic background	2 (1.0)
N/A, data missing or not answered	1 (0.5)

9.2.1.2 Education

Over half of participants (56%) were educated at graduate or post-graduate level (Table 14). Nearly a quarter (23%) of participants had a diploma or equivalent. Fifteen percent of participants had either GCSEs or no qualifications. Over three-quarters of participants (77%) had an addiction-specific qualification, although the nature of this qualification was not described. The proportion of participants with an addiction-specific qualification was slightly higher among participants who had been working for under two years (70% had an addiction-specific qualification), and participants who had been working for over five years (81% had an addiction-specific qualification), than for staff who had been working for between two and five years, where only 62% had an addiction specific qualification (X^2 (df, n=200) = 5.55, p=.062) (Table 15).

Table 14: Education of survey participants (n=200)

Formal Education	***n* (%)**
No qualification	6 (3.0)
GCSEs grades A*-C or equivalent	23 (11.5)
A Level or equivalent	8 (4.0)
Diploma or equivalent	46 (23.0)
Degree or equivalent	67 (33.5)
Post graduate degree or equivalent	44 (22.0)
Other qualifications	5 (2.5)
Don't know	1 (0.5)
Binary variable	
Degree or post graduate	111 (55.5)
All other education	89 (44.5)

Table 15: Addiction-specific qualification by years' experience working in addiction treatment settings, survey participants (n=200)

Participants reporting an addiction-specific qualification	***n* (%)**	**df**	***X²***	**Sig.**
Full sample	153 (76.5)			
By years' experience				
Under two years	21 (70.0)			
Two to five years	18 (62.1)			
Over five years	114 (80.9)	2	5.549	p=.062

df = Degrees of freedom

9.2.2 Qualitative interview findings: Substance misuse worker participants' demographic and educational characteristics

9.2.2.1 Demographic characteristics of the interview sample

The interview sample (n=31) was largely, but not entirely, recruited from survey participants. Ten interview participants were recruited using snowball sampling as described in Chapter 8. Therefore, the data describing the demographic and educational characteristics of interview participants do not describe a subgroup of survey participants but are presented to enable comparison between participant samples.

The demographic characteristics of the interview sample were similar to those in the survey sample. The most common age group for both survey and interview participants was 41-50, with 36% of survey participants and 35% of interview participants in this group. Participants over 65 were absent from the interview sample. Just 23% of interview participants identified as male compared to 34% of survey participants. In the survey 85% of participants identified as 'White: British', compared to 74% in the interview population (Table 16). There were also similar levels of education among survey and interview participants. Fifty-eight percent of interviewees had completed a degree or higher form of education compared to 56% of survey participants. Several participants had counselling qualifications, and many had a National Vocational Qualification (NVQ) in Health and Social Care.

Table 16: Demographic characteristics of survey (n=200) and interview (n=31) participants

Item	Survey participants *n* (%)	Interview participants *n* (%)
Age		
16-20	1 (0.5)	1 (3.2)
21-30	23 (11.5)	5 (16.1)
31-40	47 (23.5)	8 (25.8)
41-50	69 (34.5)	11 (35.5)
51-65	56 (28.0)	6 (19.4)
65+	3 (1.5)	0 (0.0)
Not reported	1 (0.5)	0 (0.0)
Gender		
Male	68 (34.0)	7 (22.6)
Female	131 (65.5)	24 (77.4)
I prefer not to say	1 (0.5)	0 (0.0)
Ethnicity		
White British	169 (84.5)	23 (74.2)
All other ethnicity	31 (15.5)	8 (25.8)
Education		
Degree or above	111 (55.5)	18 (58.1)
All other education	89 (44.5)	13 (41.9)

9.2.2.2 Education

Participants who had completed education in their own time had done so when volunteering, working part-time, or when granted flexible working hours by their employer. Many said that education would have been impossible without these facilitating factors. Courses were usually based at local colleges involving evening classes with assignments to be completed at home. A few participants had completed distance learning courses, and some had completed their education using online learning (which is discussed in more detail in Chapter 10).

Participants said that studying at home had disrupted their work and home life. Many saying that it had been difficult to fit education around their existing commitments and that it had caused them to become stressed. One participant said they had stopped their education when available time from

work had been removed. A lack of money or the prospect of incurring debt had also deterred participants from completing education in their own time.

9.2.2.3 Addiction related education

The most common addiction-specific qualification was an NVQ in Health and Social Care (with one participant completing an NVQ in Counselling Skills). Most reported NVQs at level three (the equivalent of A-levels (HM Government, 2018)), but levels two and four were also reported. The format and requirements of an NVQ often caused confusion and most participants associated completing the NVQ with being stressed.

> *"NVQs are the most painfullest, things in the world. Basically, you've got to fit your work into a box. I had such arguments with my assessor, because I was just like 'just tell me what you want me to say and I'll say it!'"*
>
> *Becky: Young persons' outreach worker*

Other addiction-specific qualifications included counselling, MRC, MSc and nursing level qualifications. Participants said that they enjoyed education that encouraged personal development. This seemed to be particularly important for those completing counselling courses. One participant said that they had enrolled on a counselling course that was a long distance away from their work so they could enjoy the personal development elements of the course among people they did not know.

> *"But I'm kind of about a lot here, NA [Narcotics Anonymous] and stuff and … I wanted my experience to be a bit more personal, so I decided not to go to the local college and I travelled to [name of small town]."*
>
> *Jenny: Non-specialist project worker*

There were mixed experiences of gaining an addiction-specific qualification. Some participants said they enjoyed addiction-specific courses and had attributed this to their well-designed content, balancing practical work skills and theoretical perspectives. Participants who had not enjoyed addiction-specific education often talked about being unable to study alongside work commitments. In many cases this was despite being allocated time by their employers; the commitments of working with service users often meant that those allocated study hours were impossible to take.

"I struggled with that because I done… most of it in my own time at home. I think it's a big ask…but they say things like 'oh you get three hours a month to sit down and do this', but it's almost impossible to come here and block out a time… if you're in the building you're available."

Jenny: Non-specialist project worker

Some participants did not think that having an addiction-specific qualification was necessary because their life experience had provided them with the skills and knowledge that they needed. Others said that their on-the-job training and experience had diminished their need for formal addiction education. Some participants said that the content of addiction-specific qualifications did not reflect their day-to-day work, and that using experience (both personal and as a SMW) was a more effective way to learn.

"INTERVIEWER: OK, and have you got any addiction-specific qualifications?

PARTICIPANT: No, no except life (laughs) yeah, because I was an addict once. So yeah.

INTERVIEWER: OK, um and what, just incidentally, kind of life experience. What do you think that brings to how you deliver treatment? How do you think that influences your practice?

PARTICIPANT: Um I suppose, on one hand I have empathy. On the other hand, I sort of kind of I know all the stories, I know all the excuses. I've made them (Laughs)."

Rowena: Team leader

Most participants were interested in having an addiction-specific qualification, but most aspirations were for qualifications higher than NVQ level 3. Some participants said that their employer was unlikely to fund study at those educational levels.

9.2.3 Summary

The findings relating to Objective 1 are summarised in Table 17. Participants had a wide range of age and education characteristics, two-thirds were female and the large majority white British. Three-quarters had an addiction-specific qualification, many had an NVQ in Health and Social Care, but this was perceived to be difficult to complete and of low educational value. Some participants thought that experience was more important than qualifications for addiction treatment provision. Many participants valued education but said that there were few funded opportunities to study addiction at the level in which they were interested.

Table 17: Summary of results relating to Objective 1

To identify demographic and educational characteristics of the substance misuse workforce

Survey data	SMW Interview data	KSH interview data
35% were aged 41-50 66% Female 85% White British 56% of participants had a first degree or over	36% aged 41-50 77% Female 74% White British 58% of participants had a first degree or over	No KSH data were used to meet this objective
15% of participants had GCSEs or no qualifications	Many had completed education in their own time, but found it difficult to make time	
77% of participants had an addiction-specific qualification New and experienced participants were more likely to have an addiction-specific qualification	Many participants had an NVQ in Health and Social Care, but most did not enjoy the process and did not value the qualification.	
81% of participants who had worked in addiction treatment services for over five years had an addiction specific qualification	Many participants wanted an addiction-specific qualification over a 'level 3'	
	Some participants thought that addiction-specific qualification not necessary because of their life skills	

SMW = Substance misuse workers; KSH = Key Stakeholders

9.3 Objective 2: To identify the working characteristics of the substance misuse workforce

The quantitative data here related to participants' work role including their delivery of therapeutic interventions, caseload size, length of time working in addiction treatment settings and whether they had experienced recommissioning. The qualitative data reported the working experiences of participants and summarised their regular tasks, their therapeutic and administrative jobs and their experiences of recommissioning. It also covered experiences of stress and 'burn out' among SMW. The KSH qualitative data related to the working contexts of KSH participants and their perspectives on recommissioning as well as working context that were relevant to the provision of SMW training.

9.3.1 Quantitative survey results

9.3.1.1 Job role and career intentions

Fifty-seven percent of participants said they managed a caseload. One caseload of 0 and one of 800 were removed from the analysis as outliers; the participant with a caseload of 800 was a medical doctor. The adjusted mean case size was 33 and ranged from 2 to 105 service users (Table 18).

Table 18: Caseload number for survey participants (n=200)

Item	Mean (SD)
Caseload number	39.6 (77.5)
Caseload number (following removal of outliers)	33.0 (26.6)

SD = Standard Deviation

Just over a quarter of survey participants (27%) said they delivered prescribing as part of their role (Figure 1). The most commonly delivered psychosocial interventions were motivational interventions, these were delivered by over three quarters of survey participants (76%). The second most popular interventions were cognitive behavioural-based relapse prevention interventions (57%), with Contingency Management (CM) and peer support both delivered by 42% of the sample (Figure 1). Delivery of recovery interventions was less common than delivery of psychosocial interventions among participants (Figure 2), with the most commonly delivered intervention (recovery check-ups) delivered by just half of participants (50%). These data indicated that

participants work with service users was characterised by psychosocial and recovery interventions, with a substantial minority delivering prescribing interventions.

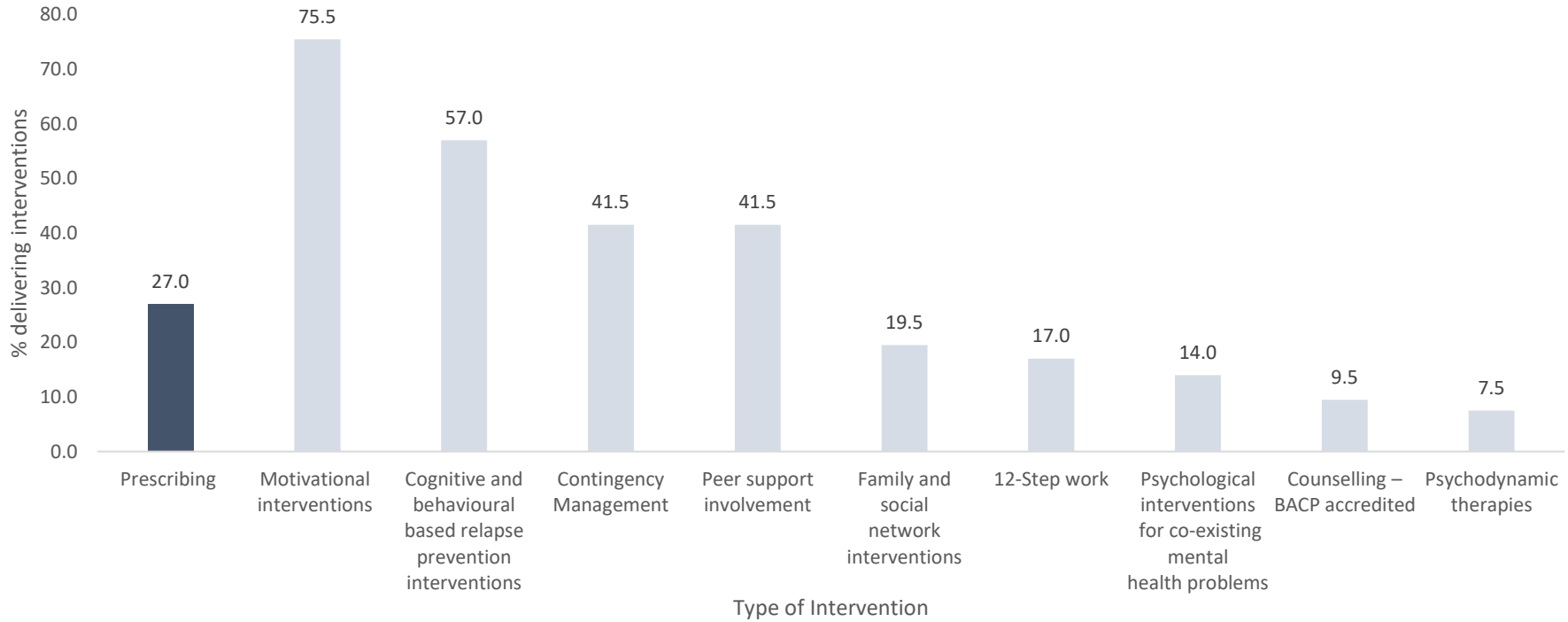

Figure 1: Delivery of psychosocial interventions among survey participants. Prescribing is included for comparison. Multiple responses could be selected (n=100)

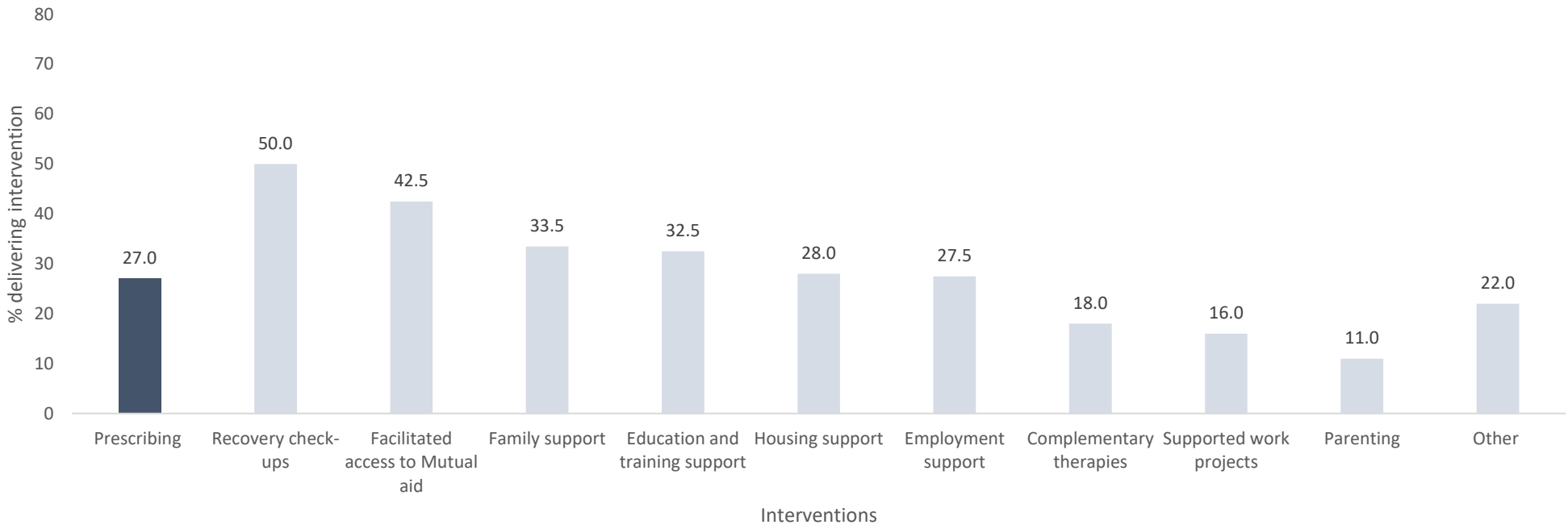

Figure 2: Delivery of recovery interventions among survey participants. Prescribing is included for comparison. Multiple responses could be selected (n=200)

Nearly 60% of participants intended to stay in their current position for the next two years (Figure 3). Over a third intended to seek promotion in their current organisation (36%) and a quarter to seek a different position within their current organisation (26%). Just under one in five participants wanted work in a different third-sector organisation (18%), and one in six participants wanted to move to an NHS organisation (13%). Fourteen percent wanted to leave the addiction treatment sector. Just five percent wanted to undertake full time study, perhaps reflecting the high impact on home and work life, and preclusive cost of education reported by interview participants.

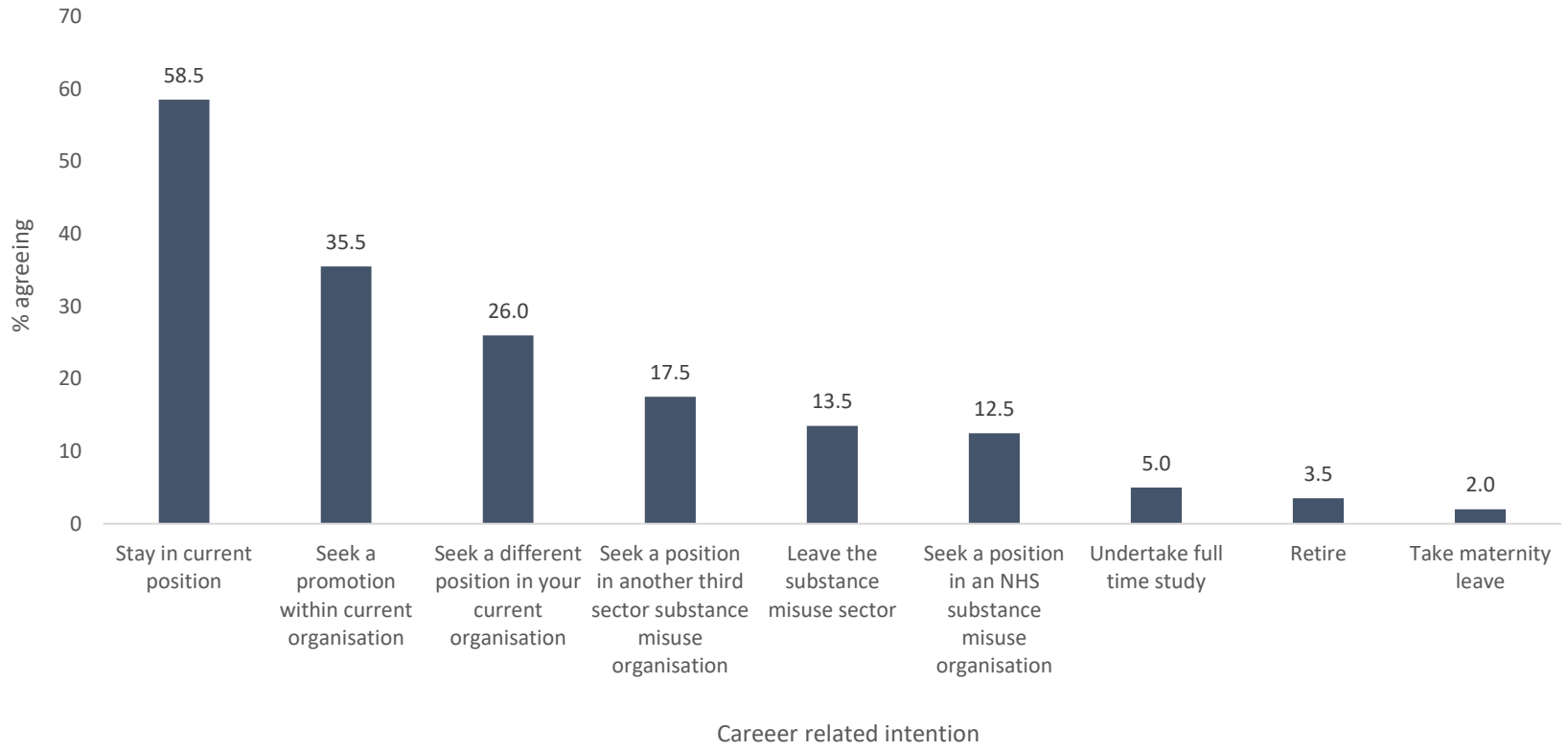

Figure 3: Career intentions among survey participants over the next two years. Multiple responses could be selected (n=200)

9.3.1.2 Experience of working in addiction treatment

Participants had worked in their job for a mean of four years, and in addiction treatment services for a mean of nine years (Table 19). The length of time working in the sector was used to create three categories replicating the analyses completed by previous studies (Aletraris et al., 2015, Lundgren et al., 2011b, Rash et al., 2012) (Table 20). Seventy percent of survey participants had worked in addiction treatment services for over five years, indicating a large amount of experience among participants. This provides an interesting comparison to the interview data presented above that suggested that participants with a lot of experience could value training less because they had learned all they need through their training and work experiences.

Table 19: Length of time in current job and in addiction treatment among survey participants (n=200)

Length of work	**Mean (SD)**
Years worked in the job	4.3 (4.2)
Years worked in the sector	9.1 (6.3)

Table 20: Length of time working in addiction treatment divided into three categories (n=200)

Time working in addiction treatment	***n* (%)**
Under two years	30 (15.0)
Between two and five years	29 (14.5)
Over five	141 (70.5)

Nearly 60% of participants had been transferred from one employer to another through Transfer of Employment – Protection of Earnings (TUPE - as described in Chapter 7), 37% had not experienced TUPE and 5% did not know (Table 21). Of those that had experienced TUPE, the average number of times was 1.6 (SD=1.0) with a minimum of one and a maximum of seven (Figure 4).

Table 21: Survey participants that have been subject to TUPE (n=200)

Response to question asking if they have ever been subject to TUPE	***n* (%)**
Yes	115 (57.5)
No	74 (37.0)
Don't know	10 (5.0)
N/A	1 (0.5)
How many times?	**Mean (SD)**
Number of times have they been subject to TUPE	1.617 (0.979)

SD = Standard deviation; TUPE = Transfer of undertakings – Protection of Earnings

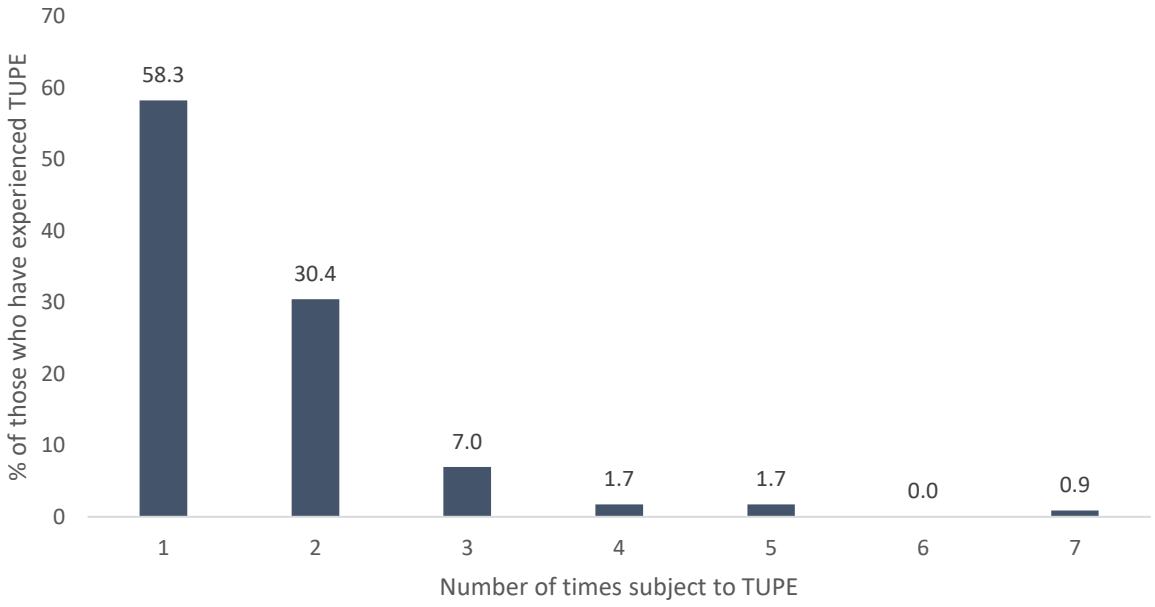

Figure 4: Number of times they have been subject to TUPE among participants with experience of TUPE (n=115)

9.3.2 Latent Class Analysis

The survey data did not identify participants' job titles. Participants' job roles were defined by using a latent class analysis (LCA) of participants' work characteristics so that subgroups of participants could be identified from their activities rather than from structures imposed by employers or

commissioners. It was decided to identify subgroups of participants according to the types of intervention that they delivered and whether they carried a caseload. The hypothesis was that differences in the type of medical, therapeutic and case management work delivered by participants would be associated with difference in training needs and preferences. This analysis also aligned with the principles of User-Centred Design (UCD) that suggest using data to identify distinct groups of end-users for the development of personas (see 7.6.1 and methods section 8.5.1.1). The variables used were binary and are described in Table 22.

Table 22: Variables used in the latent class analysis

Variable	Level	Meaning
Prescribing	0	Does not provide prescribing
	1	Provides prescribing
Caseload	0	Does not carry a caseload
	1	Carries a caseload
Psychosocial	0	Delivers two or fewer types of psychosocial intervention
	1	Delivers more than two types of psychosocial intervention
Recovery	0	Delivers two or fewer types of recovery work
	1	Delivers more than two types of recovery work

9.3.2.1 Identifying a model of best fit

The LCA was run as described in Chapter 8, creating analyses based on two, three, four and five-group models. The results indicated that the analyses based on two-group, three-group and five-group models converged on a single analysis for over 80% of iterations and were therefore considered acceptable for inclusion. The four-group model did not converge on one set of subgroups and was therefore discounted.

9.3.2.2 Latent class analysis: Best fit models identified using a fit-plot

A graph was produced to display the Akaike Information Criterion (AIC), and Bayesian Information Criterion (BIC) results, which enable comparison of models based on how well they fit the data as described in section 8.5.1.1. The AIC and BIC are comparative measures, meaning that models with lower results fit the data better than models with higher results. The results presented in Figure 5 indicated that the two-group model fitted the data best, although there was little difference between the two and three group models, indicating that both would be acceptable. The one group, four group and five group models were discounted following this analysis.

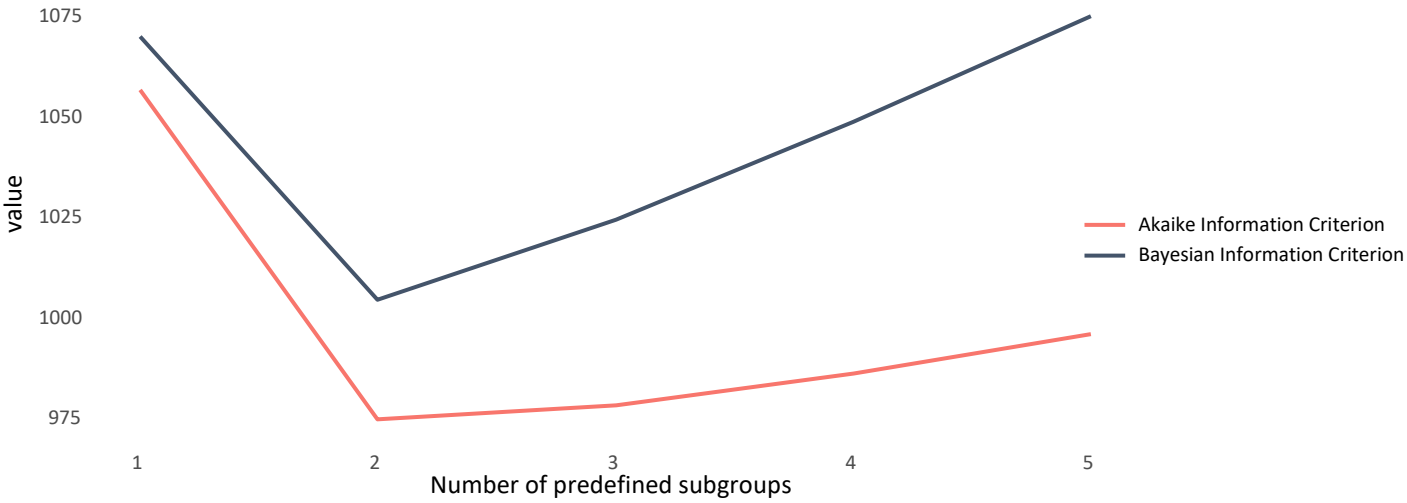

Figure 5: Latent class analysis: Analysis of 'best fit' using Akaike Information Criterion and Bayesian Information Criterion

9.3.2.3 Latent class analysis: Identifying models of 'best fit'

Item response plots were then created for the two-group and three-group models (Figure 6 and Figure 7). An item response plot shows the probability of participants being associated with each variable included in the LCA and can be used to identify characteristics of identified subgroups. Following analysis of the response plots, the three-group model was selected because it identified more distinct groups than the two-group model. It was decided that the three-group model would be more effective for meeting the objectives of the study.

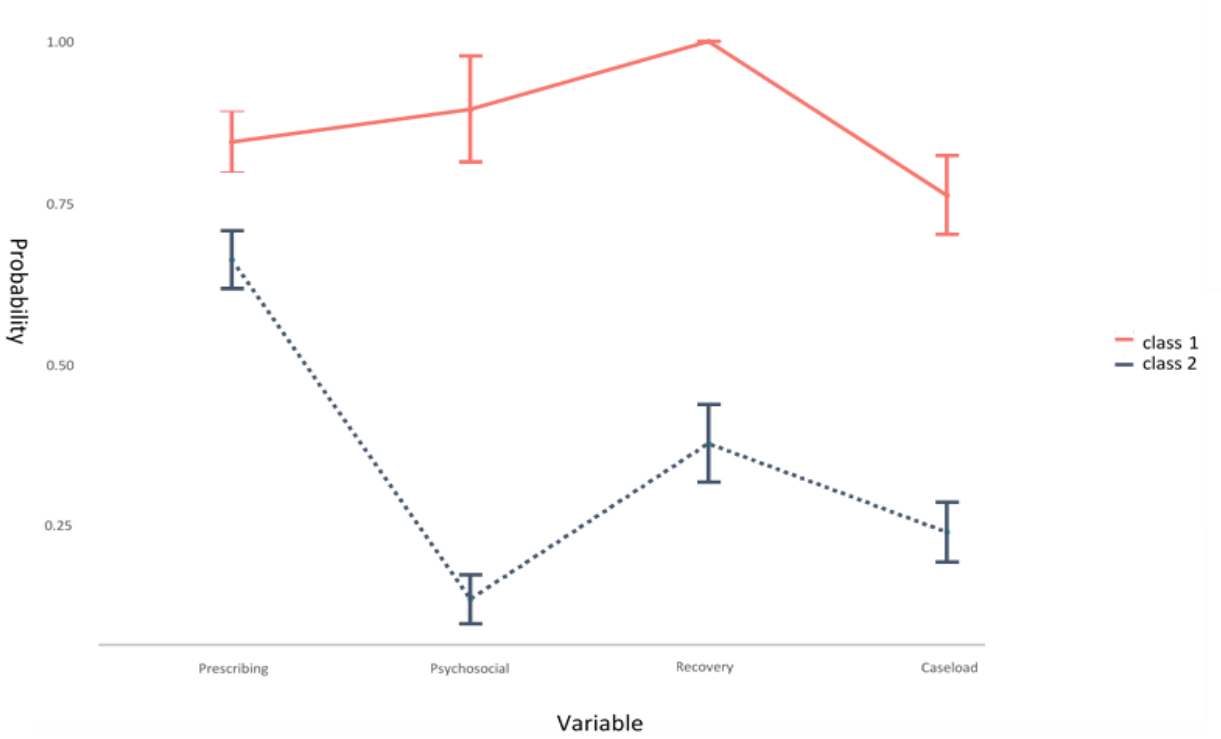

Figure 6: Latent class analysis: Item response plot for two group model estimates

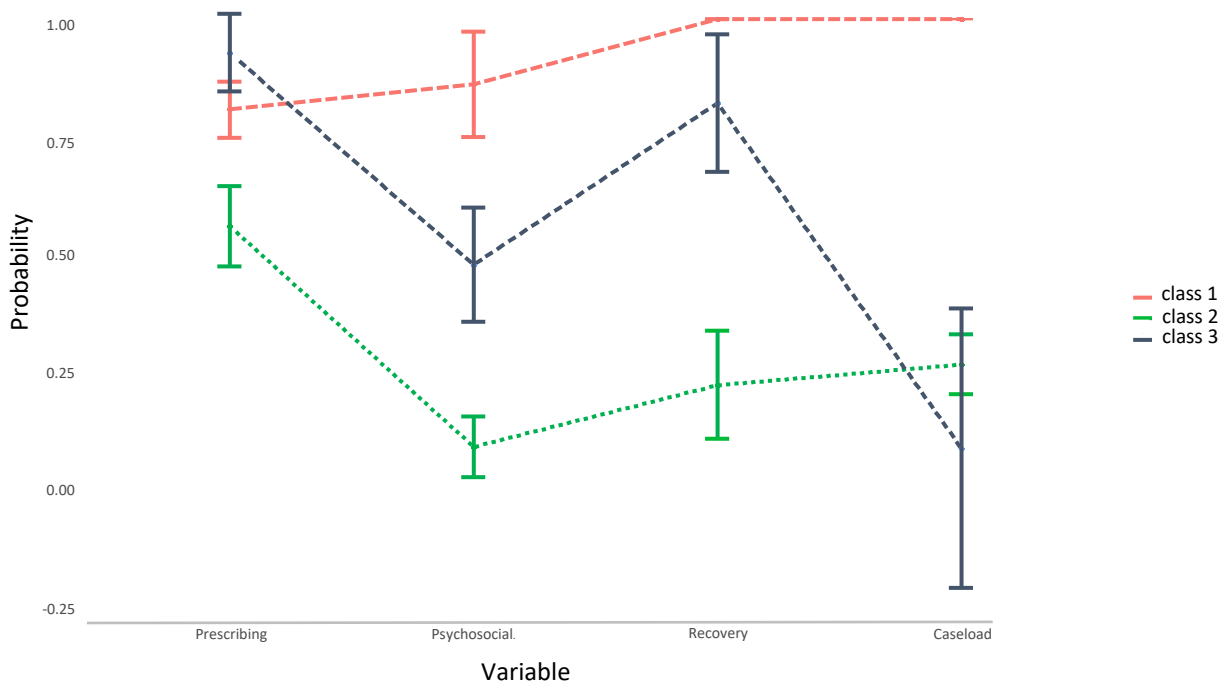

Figure 7: Latent class analysis: Item response plot for three group model estimates

9.3.2.4 Model estimates

Table 23 provides estimates of subgroup characteristics. The classes were named to reflect those characteristics with Class 1 named 'Recovery Keyworkers', Class 2 named 'Non-specific SMW' and Class 3 named 'Prescribers'. Recovery Keyworker participants comprised 29% of participants and had a greater probability of carrying a case load and of providing high levels of psychosocial and recovery work than the other two classes. Non-specific SMW comprised 44% of participants, had a moderate probability of delivering prescribing interventions and were less likely to provide psychosocial and recovery work than the other groups. Non-specific SMW also had a low probability of carrying a caseload, albeit slightly higher than Prescribers. Participants in the Prescribers group comprised 26% of participants and had a high probability of delivering prescribing and recovery work, a moderate probability of delivering psychosocial work, and almost no probability of carrying a caseload.

Table 23: Latent class analysis three-class model estimates

	Estimated probability of class and attribute membership by latent class group		
Category Name	**Recovery Keyworkers**	**Non-specific SMW**	**Prescribers**
Class membership	0.29	0.44	0.26
Prescribing	0.81	0.56	0.93
Psychosocial	0.86	0.09	0.48
Recovery	1	0.22	0.82
Case load	1	0.27	0.09

SMW = Substance misuse worker

9.3.2.5 Demographic and education characteristics by latent class membership

Demographic characteristics were compared between subgroups to identify any differences in variables that would require their inclusion in further statistical analyses. There were no differences at $p<0.05$ for age, gender, ethnicity and education and so none of the demographic characteristics variables were included in further statistical analyses (Table 24).

Table 24: Demographic characteristics of latent class analysis subgroups (n=200)

Item	Latent class subgroup *n* (%)					
	Recovery Keyworkers	Non-specific SMW	Prescribers	df	X^2	Sig.
Age						
16-20	0 (0.0)	1 (1.2)	0 (0.0)			
21-30	8 (12.5)	7 (8.5)	8 (14.8)			
31-40	8 (12.5)	23 (28.0)	16 (29.6)			
41-50	20 (31.3)	30 (36.6)	19 (35.2)			
51-65	25 (39.1)	21 (25.6)	10 (18.5)			
65+	2 (3.1)	0 (0.0)	1 (1.9)			
Data missing/not answered	1 (0.6)	0(0.0)	0 (0.0)			
Total	64 (100)	82 (100)	54 (100)	10	14.961	*p=.134*
Gender						
Male	20 (31.3)	31 (37.8)	17 (32.1)			
Female	44 (68.8)	51 (62.2)	36 (67.9)			
I prefer not to say	0 (0.0)	0 (0.0)	1 (0.5)			
Total	64 (100)	82 (100)	53 (100)	2	0.828	*p=.661*
Ethnicity						
White British	54 (84.4)	72 (87.8)	43 (79.6)			
All other ethnicity	9 (14.1)	10 (12.2)	11 (20.4)			
Data missing/not answered	1 (1.6)	0 (0)	0 (0)			
Total	64 (100)	82 (100)	54 (100)	2	1.745	*p=.418*
Education						
Degree or above	38 (59.4)	40 (48.8)	33 (61.1)			
All other education	26 (40.6)	42 (51.2)	21 (38.9)			
Total	64 (100)	82 (100)	54 (100)	2	2.577	*p=.276*

** Chi-square test excludes 'data missing or not answered' and 'I prefer not to say'*
df = Degrees of freedom; SMW = Substance misuse worker

9.3.2.6 Addiction-specific qualification by latent class membership

Non-specific SMW were more likely to have an addiction-specific qualification (Table 25) with 87% having such a qualification compared to 72% of Prescribers and 67% of Recovery Keyworkers (X^2 (2, n=200) = 8.276, p=.016). Recovery Keyworkers were most likely to carry a caseload and deliver interventions yet were the least likely subgroup to have an addiction-specific qualification, indicating a difference between qualifications of those delivering prescribing and psychosocial work.

Table 25: Addiction-specific qualification by latent class subgroup membership (n=200)

Addiction-specific qualification	Latent class subgroup *n* (%) Recovery Keyworkers	Non-specific SMW	Prescribers	df	X^2	p-value
Yes	43 (67.2)	71 (86.6)	39 (72.2)			
No	21 (32.8)	11 (13.4)	15 (27.8)			
Total	64 (100)	82 (100)	54 (100)	2	8.276	*p=.016*

df = Degrees of freedom; SMW = Substance misuse worker

The LCA identified three subgroups with different working characteristics, different levels of addiction-specific qualifications but no differences in demographic characteristics. The groups will be used in the analysis of quantitative data through the present study.

9.3.3 Qualitative interview findings: Substance misuse worker participants' working characteristics

9.3.3.1 Length of work experience and attraction to the sector

Participants had worked in their current service for an average of 3.6 years ranging from 6 months to 18 years and had worked in addiction treatment services for an average of 7.5 years, ranging from 18 months to 18 years. Participants rarely reported starting addiction treatment work as a career choice. Many said that they had been curious about the nature of addiction or had wanted to 'give something back'. Participants reported having worked as a volunteer, sessional worker or administrator before then working in more therapeutic roles. Some talked about being fascinated by the work and enjoying the face-to-face work with service users. The most commonly reported reason for participants' continued interest in addiction treatment work was that the work they did helped vulnerable people to change. Small but observable changes in service user behaviour seemed to help participants feel positive about their job.

> *"Generally it's like seeing someone find recovery … just give them a little bit of light they come in and say 'oh my mum's speaking to me again'. It's the little things. I know it sounds cheesy but that is what actually makes the job fulfilling… I need to know that there's tangible evidence that I'm doing well."*

Alf: Team leader

This same kind of immediate interactions with service users could also be the cause of distress among participants. Working with resistant, stuck or disengaged service users was cited as the cause of stress, as was talking with service users about traumatic experiences. Some participants commented that this intense and changeable side to work prevented their jobs from becoming dull. The factors related to service users that were identified as the cause of stress were often also factors that kept participants interested in their job.

9.3.3.2 Working characteristics

The 31 interview participants had 29 different job titles between them (Table 26). Even among those titles that were comparable, the descriptions of working roles and tasks varied considerably.

Table 26: Job titles of interview participants

Recovery worker x2	DRR and probation link coordinator
Team leader x 2	Health and wellbeing nurse
Apprentice recovery worker	Peer mentor coordinator
Clinical lead	Project worker
Clinical lead nurse	Psychological interventions practice lead
Complex case coordinator	Recovery co-ordinator
Counsellor	Recovery support worker
Criminal justice recovery coordinator	Senior counsellor and clinical supervisor
Criminal justice recovery worker	Senior project worker
Engagement and recovery worker	Substance misuse practitioner
Family safeguarding recovery worker	Wellbeing service care coordinator
Family worker	Young person's project worker
GP outreach worker	

Analysis of the interview data produced five themes relating to common tasks carried out by participants: assessments, key-working, liaison with external agencies, prescribing and groupwork. They also identified large amounts of administrative work which is discussed separately.

Most assessments were designed to identify service users' needs and to form the basis of a care plan. Several participants said they also completed assessments to make onward referrals to probation, detoxification facilities and other externally provided services. One participant noted that service users can be subject to many different assessments if they accessed care in different agencies. Key-working sessions tended to use the information from assessments and were focused on care-planning. The nature of key-working seemed to vary considerably among participants and could involve helping service users develop coping strategies, carrying out drug tests, giving harm

reduction advice, working on triggers and making referrals. Key-working was sometimes referred to as simply 'seeing my service users', implying an informal rather than a therapeutic setting.

Differences between key-working care-planning and one-to-one sessions were not distinct, and participants seemed to use the terms interchangeably. Prescribing work mostly concerned opiate substitution therapy, but also included alcohol detoxification. Prescribing tasks were predominantly administrative and involved completing assessments, dose titration, reviewing medication and ensuring prescriptions were printed as required. Several participants said they delivered structured groupwork sessions. Some of these groups were unplanned and were designed around service users' needs, others were delivered as part of a structured, manualised treatment programme.

Other routine tasks involved attending meetings, counselling, drug testing for criminal justice service users, family work, keeping case notes, managerial tasks, needle exchange, outreach, peer mentoring, blood-borne-virus (BBV) testing and vaccination, telephoning service users, updating service user databases and volunteer coordination. One participant described said that, although they completed a wide range of tasks in a regular day, all those tasks converged on supporting service users suggesting that the diverse nature of SMW job roles reflects the diverse and changing needs of the service users.

> *"Um obviously we do other things, lots of lots of little tasks like man the front desk, like run groups, er like, do care plans, do assessments. …. like, I'm going to have to do a drugs test in 25 minutes time, whenever my client turns up so that's a little thing. I sit in on the clinic with her when she's here, listen to what the doctor's got to say and then, if there's any recommendations go away try and put into practice what the doctor wants about that particular client's needs… So yeah, there's lots and lots of little things, but generally speaking you are there to help and support an individual."*
>
> *Thomas: Non-specialist project worker*

Very few participants said they would directly offer evidence-based treatments to service users. Many said that although they would use therapeutic techniques such as Cognitive Behavioural Therapy (CBT) and Motivational Interviewing (MI) with service users, but that they would do so according to context, and would be cautious about advertising their use.

> *"Yeah as in I don't go into a session with my client and say 'we're going to do a bit of Motivational Interviewing'. Um. I think just so contrived and patronising."*
>
> *Jenny: Non-specialist project worker*

By comparison, participants were less cautious about promoting alternative therapies. Mindfulness groups, acupuncture and other alternative therapies were routinely advertised to service users and often a fixture in the weekly schedule of treatment services. However, those same staff remained cautious about offering evidence-based therapeutic interventions. Other treatments offered to service users included 12-step groups, Acceptance Commitment Therapy, Brief Solution Focused Therapy, CM, Cycle of Change, Eye Movement Desensitisation and Reprocessing Therapy, naloxone, harm reduction triangle and out-of-school clubs.

9.3.3.3 Administrative work

Participants said they completed substantial amounts of administrative work during their working day. This included answering emails, attending meetings, case note management, completing employment-related tasks (annual leave, appraisals etc.), conducting site checks, covering 'duty' (answering telephones, doors and taking referrals), data entry, discharging service users, making referrals, managing a calendar, running audits, writing court reports and writing other letters. Participants said that this range of administrative work was very time consuming, mundane and stressful.

> *"The job is really dominated by data. Care planning, care planning reviews, physical health screens, risk assessments, data-basing what happened. Yeah there's a lot of data. So er, deep breath, deep stressful breath."*
>
> *Abby: Non-medical prescriber*

The stress described by participants relating to administrative work was often related to the negative impact that such work had on participants' ability to work with service users. Many said that the emphasis on administrative work could be to the detriment of building relationships with service users.

> *"When you are so focused on closing them [service users' files], sometimes you don't spend time on that relationship: 'but I've got to do harm reduction' 'I've got to do the paperwork' 'I've got to do the assessment' 'I don't really care about what's going on with you'."*
>
> *Becky: Young persons' outreach worker*

Several participants said that the emphasis placed on administrative tasks came from organisational structures. One participant said that their manager would regularly audit completion of administrative tasks, but rarely comment on the quality of their key-working sessions.

"Yeah, and it's the most important part of work that we're doing working with the client… And that's our bread and butter and that's where 'up there' [management] don't, you know. But yeah I'll get 14 emails if I haven't done TOPS [Treatment Outcome Profile] forms or… and I know it's important I understand, I don't need to be explained to what they're for, but it's just…"

Rachel: Non-specialist project worker

Some participants talked about stress experienced by colleagues with low levels of education. For these SMW, the time burden of administrative tasks seemed to be particularly onerous. Some participants acknowledged that training in administrative skills was available but was rarely taken up by SMW. One participant was worried that the burden of administrative tasks could result in SMW who were skilled at establishing positive relationships with service users leaving addiction treatment services.

"I really hope in this field there remains space for workers who are exceptionally skilled at the practical aspect of delivery, who can communicate with clients at levels that I can only aspire to, but that come back and think, 'I don't know how to write that up, I don't know what words to use, I don't know if I'm confident in my typing' or 'I'm worried about my spelling' and there needs to be space in these organisations for people who feel that way because they are gifted."

Nina: Non-specialist project worker

9.3.3.4 Experience of recommissioning

Twenty-two interview participants had worked in a service that had been recommissioned. Of the remaining nine who had not experienced recommissioning, three said that their services were either currently being, or were soon to be, recommissioned.

Disruption to service delivery was a common experience among those who had experienced recommissioning. Some disruption was from reductions in funding, whilst some disruption originated in recommissioning processes themselves. The disruption from reduced funding was most noted through increased workloads and reduced staff teams. Participant said that they were less able to respond to service users who might drop in, or who might need extensive support.

"I think it was quite visible that we'd lost that amount of money, you can't really hide the fact that you haven't got that many staff around the building any more. And when people drop in, you can't deal with that 'I'm sorry it's going to have to be an appointment', you know we

haven't got you know 'Well can't you just test me now?' 'No, because I haven't got anyone to do it'."

Margaret: Team leader

Disruption originating from the process of recommissioning (rather than from the reduction in funds) seemed to encompass two phases. Analysis of the data identified two distinct phases of disruption; disruption prior to a change in contract, and disruption after a new provider took over treatment delivery. Participants described a period of uncertainty prior to recommissioning, noting that during this phase, work places could be placed 'on hold'. This meant that they had restricted access to training and other development activities. Some talked about diminishing motivation among staff during this phase as they continued to work in a service with an uncertain future that was staffed by people looking for other jobs.

"Well because you spend a year not knowing, so you know it's coming, and then you spend sort of six months not knowing who it's going to be, and then you know who it is and wish you didn't, and then you spend sort of three or four months thinking 'have I got a job or haven't I got a job?' 'what am I going to be doing?' Um, so actually, also, so it's really hard to keep motivated, so you know I've tried. I've had teams I was managing teams to try and keep them motivated and it's really difficult to keep them motivated because it's almost like 'what's the point?'."

Vanessa: Supported housing worker

Many participants reported that, following recommissioning, they had had to relearn how their service was run and how it had been re-structured. Many talked about feeling unsure of new treatment processes, commenting that this uncertainty was also experienced by service users. There were cases where neither staff nor service users were certain of how a new treatment system worked.

"And er, so that was a) new for us and b) new for all the clients as well, knowing who they were going to see 'well why am I not seeing you anymore?' 'Well I only work for [Treatment provider x]' 'I only work for [Treatment provider y]' rahrahrah. Yes, and then of course it was chaos because [x] would not let us see their paperwork and [y]…. It was like. It was hell to be honest. It was absolute hell."

Rachel: Non-specialist project worker

Recommissioning was not described as an event, rather referred to as a process that could last for up to two years. This process when compared to the three-year contracts experienced by some participants, meant that the prospect and influence of recommissioning on treatment delivery could be almost continually present. Many participants said that they hoped service delivery contracts would be offered for longer than three years.

Participants recalled very few positive experiences of recommissioning. However, one participant talked of a service system that had been stagnating before being recommissioned, and that recommissioning had improved service delivery and commitment from staff.

> *"I think initially in the first TUPE …there was some stagnation there, you know just some of the workers just you know not really, a bit stuck in, not really needing to up their game, you know. So, in that process of TUPEing I have had to, you know, be more on the ball, because the whole time you're going into new organisation there's new learning there's new this there's new that. So, that's kind of stimulating I suppose in a way, but at the same time it's very stressful."*
>
> *Abby: Non-medical prescriber*

Another benefit from recommissioning was recalled by one participant who said that they had gained access to a wide range of training having been transferred (by TUPE) from a small organisation to a larger organisation that had more training resources. One participant said that their case-load had reduced following recommissioning when caseloads were re-distributed across a local treatment delivery system. These participants did not advocate recommissioning but could identify positive aspects to the process. One of those finding benefit from recommissioning said that they would rather completely stop working in addiction treatment, than work in a service being recommissioned again, illustrating the fear with which those processes can be viewed.

> *"So kind of being able to manage all that disruption all the time and work effectively with clients is just a really difficult process and I wouldn't go through it again. If [name of city borough] go through another re-tender, I'll fucking go off sick I would not go through it. I can't go through it again I've been through it twice."*
>
> *Abby: Non-medical prescriber*
>
> *"I mean we've had so much taken away, you know we've experienced loss and it's almost like grief and you know it's about getting over that."*
>
> *Jamie: Nurse*

9.3.3.5 'Burn out' and stress among substance misuse workers

Stress and 'burn out' were not items on the interview topic guide and so responses were unprompted. The inductive nature of this code means that the opportunity to present an opposing view (i.e. that addiction treatment work is not stressful) was not always available. Recommissioning (as discussed above) was the most commonly reported cause of stress or burn-out among participants. Other factors included participants themselves, employers, administrative work, workload and secondary trauma.

Participants acknowledged that their own actions could cause them stress. Some talked about their own (or their colleagues') lack of firm boundaries as a cause of stress. They also described how getting a new job, developing resilience and having a good sense of humour could be protective factors for these kinds of stressors. Provider organisations were identified as a cause of stress as well as a source of support. Several participants commented on feeling supported through supervision and through access to mindfulness and other therapeutic resources that had been made available by their employers. A good manager was seen as protective of stress, but many participants said that the capacity of their managers to support SMW had diminished over time. Stressful experiences often revolved around being given low levels of support in combination with high workloads or increasing caseloads. One participant reported feeling bullied and neglected by different employers.

> *"Well I was also TUPEd to [Treatment provider x], but [x] are different, they don't bully they just neglect."*
>
> *Laurence: Counsellor*

Another cause of stress raised by participants was the large amounts of administrative work that was required. This stress was mostly centred on the notion that the time used for administrative tasks was at the cost of time spent working with service users. Service users themselves were also cited as a cause of stress. Many participants talked about the emotional impact of listening to service users whose lives were distressing. Hearing service users' histories was often talked about as a cause of secondary trauma.

> *"I do think it's a big factor in the field, burn out and secondary trauma as well. It's not discussed very much, not in this country anyway."*
>
> *Harriet: Team leader*

9.3.4 Qualitative interview findings: Key stakeholder participants' working characteristics

9.3.4.1 Working background

Job titles for the KSH interview participants (n=14) were recorded but are not reported here because of the potential for KSH participants to be identified. One KSH worked at management level, three worked at senior management level, five worked outside the third-sector and were involved in regulation, policy, commissioning, independent training and research dissemination initiatives and five were involved in training or professional development. The type of tasks completed by KSH participants included data management, inspection, management and oversight, performance improvement, regulation, strategy and training. Most management or senior management roles involved oversight of services, groups of services or organisational departments such as training, or human resources. Management tasks involved ensuring services were delivered according to contract and ensuring quality of service delivery. KSH who were managers also reported taking responsibility for adherence to safeguarding and health and safety policies.

Many KSH were responsible for making sure services would pass an inspection by the Care Quality Commission (CQC) and for carrying out service audits. These audits were mostly focused on ensuring regulatory standards were adhered to; including health and safety or risk management standards. Service audits rarely focused on the delivery of therapeutic interventions, a prioritisation that mirrors the SMW participants' perceptions about the emphasis placed on regulatory compliance. Performance improvement plans were often practical and local, but strategic performance management was also common among organisational directors. Strategic work often involved contributing to tender documents, rewriting organisational policies, and identifying strategies to improve performance that could be transferred across the whole organisation.

Data management was a recurrent theme throughout KSH and SMW interviews. KSH were more likely to use and analyse data to improve treatment, conduct audits or to inform contract monitoring than SMW who were more likely to enter data without involvement in their use or analyses.

> *"My job essentially is about those iterative cycles of understanding data turning that into information trying to translate that into knowledge trying to then understand what is actually going on in a more holistic sense and then trying to understand how we can make that better. Testing. Trying piloting and then evaluating and then off we go again."*
>
> *Sarah: Senior management (KSH)*

Writing, organising, delivering and auditing training were all reported as regular activities, particularly among KSH whose jobs were related to training. Training formats included group training, individual coaching and online learning.

9.3.4.2 Experiences of recommissioning

As with the SMW interviews, the theme of recommissioning was recurrent in the KSH interviews. Perceived benefits from recommissioning were largely focused on engendering change, with drawbacks related to disruption. Four primary themes relating to recommissioning were identified through analysis: money, recommissioning processes, quality standards and competition between providers.

KSH Perceived the reductions in funding attributed to recommissioning was to be the main cause of disruption to addiction treatment service provision. A perception that contrasts with the SMW interviews where the process of recommissioning was more integral to service disruption. KSH perceptions were mostly related to the effect of recommissioning on training provision, an emphasis that can be partially explained by the focus of the study, interviews and KSH recruitment process. One KSH said that when money is constrained training was often subject to reductions before other areas of an organisation. It is interesting to note that a different KSH said that training provision and funding had consistently increased since they started working in addiction treatment.

The reductions in funding were seen by KSH as affecting caseloads and staffing levels. One KSH noted that staff were now working in small groups rather than in one-to-one sessions in order to provide addiction treatment to greater numbers of service users using fewer staff. Many KSH said they were anxious about future funding reductions and were unsure about how they could make further reductions in costs.

> *"You know we've got to swipe off £250,000 off the budget [of treatment in a local authority] for next year… so where we going to lose that?"*
>
> *Karen: Senior management (KSH)*

KSH also talked about the disruption from recommissioning processes, and echoed concerns among SMW that the disruption was compounded by having short contracts. One KSH talked about how investing in a service towards the end of a contract was harder to justify, providing some perspective on SMW interview data where participants noted that services were placed 'on hold' prior to recommissioning.

"One of the things at the minute in [name of county], they're doing the data entry in that service so we're putting risk plans … and recovery plans on to [the online case management system] and the triage…and they'll just have the laptops and, the lot. But they haven't got WiFi in [name of service] so that's not going to happen…until we get WiFi and we can't have WiFi, because we haven't got any money because of the funding because the tender's up and the contracts up from March next year."

Karen: Senior management (KSH)

Another source of disruption from recommissioning processes was from transferring staff from one organisation to another (TUPE). The disruption of this process experienced by SMW participants (new treatment services and employment uncertainty) was considerably different to the disruption experienced by KSH. TUPE processes were seen to be complicated when staff from different organisations with different qualifications, skills, training experiences and values had to merge together to form a new service. One KSH suggested that transfers of staff from NHS to third-sector organisations could be more problematic than transfers within the third-sector. They commented that staff who were subject to transfers from NHS to third-sector organisations had, at times, been low performing staff. They did not suggest that this was common practice, rather that it was something they had been aware of during some recommissioning processes.

"I think of the time of people being allocated to substance misuse services when perhaps the perception was that they haven't got good client skills and that's a good place to put them because they, people don't turn up… That's, I've just heard that from a couple of NHS managers. That that's what they did because. The old-world perception was that these people [addiction treatment services users] don't turn up anyway and we've got nowhere else to put 'Elle'."

Michael: Senior management (KSH)

Some KSH said that recommissioning processes had the potential to improve the quality of addiction treatment service delivery. One KSH said that the reason for organisations to ensure SMW were trained in therapeutic interventions was because skilled staff would improve the quality of service delivery and that this high quality of service delivery would help the organisation to win contracts.

"PARTICIPANT: You know we're in a contracted environment we've got contract for three to five years. We don't do very well we lose the contract we lose money.

INTERVIEWER: And staff skills and knowledge and abilities directly contribute towards keeping contracts and gaining new contracts?

PARTICIPANT: Yes, because it directly contributes towards performance. So we get measured on a set of PI [performance indicators] whatever. So if we're not performing we lose the contract."

Sarah: Senior management (KSH)

There was a contrasting view about the extent to which quality service provision influenced recommissioning decisions. A different KSH doubted the role of quality and performance in winning contracts.

"INTERVIEWER: OK and having those standards, if an organisation is able to set its standards, does that, does that have an impact on…winning or losing tenders or commissions?

PARTICIPANT: Probably not….because my experience of commissioning and tenders which I have been at the brutal end of for many years and still am, is that um, you can be delivering a bloody excellent service and have been doing that for a long time, no reason to take the contract away from you and they give it to somebody else. I've seen it happen… It happened in [name of city]. They've now destroyed the treatment service."

Sofia: Senior management (KSH)

Some KSH talked about the consequences of being in regular competition with other third-sector providers. Some referred to this as a barrier to sharing knowledge, resources and initiatives that might improve treatment delivery, because sharing such information might give a competitor organisation an advantage in future tendering processes. Competition was also raised as a driver for using inexpensive, non-professional staff, where the costs of training and paying a professional workforce might make an organisation uncompetitive.

"We're not united as a sector. We are absolutely not. Because every day of the year we're fighting each other for a new tender…And the fact that we deliver good quality treatment doesn't seem to make a bloody difference. So why should we qualify our staff?"

Sofia: Senior management (KSH)

9.4 Summary

The findings relating to Objective 2 are presented in Table 27. A quarter of SMW participants delivered prescribing, over half carried a caseload, most provided psychosocial and recovery interventions, with an emphasis on psychosocial work. Administrative tasks were often seen as

excessive, onerous and reducing time available for service users. Most participants had experienced recommissioning, which was perceived to be highly stressful and disruptive. Participants were interested in the subject of addiction and were committed to helping service users, although many acknowledged that the work could be stressful. A latent class analysis identified three subgroups of participants defined by their working characteristics.

KSH were recruited from a range of managerial and strategic roles representing different interests in training provision for SMW. Most had worked in addiction treatment prior to working in their current post. KSH also saw recommissioning as disruptive and talked about the impact of the reduced funding associated with recommissioning. KSH were particularly aware of the disruption and challenges of transferring staff under TUPE. There were mixed views about whether recommissioning was related to quality service provision and value for money.

Table 27: Summary of results relating to Objective 2

To identify the working characteristics of the substance misuse workforce

Survey data	SMW Interview data	KSH interview data
57% of participants managed a caseload with a mean size of 33	Mean time in addiction treatment was eight years, mean time in their current job was four years	KSH participants' work roles were strategic and management based, some KSH were involved in training, some in regulatory and some in policy settings
Most participants delivered psychosocial interventions, fewer delivered recovery and prescribing interventions	Most participants found addiction treatment to be an interesting but stressful job	Tasks carried out by KSH often related to ensuring regulatory compliance, but rarely concerned ensuring the quality of therapeutic interventions
60% of participants intended to stay in their current job for the next two years, 14% wanted to leave the sector	Main tasks included assessments, key-working, liaising with external agencies, prescribing, groupwork	KSH were affected by recommissioning, but the reduction in available funding was the largest disruption for KSH. The process of recommissioning put services 'on hold'. KSH experienced difficulties with TUPE and transferring staff
70% of participants had worked in addiction treatment for over five years. The mean time working in the sector was nine years, the mean time in their current job was four years	Many delivered Cognitive Behavioural Therapy and Motivational Interviewing, but would not 'offer' these to service users	Some KSH thought recommissioning improved the quality of treatment provision and training. Others thought recommissioning reduced the quality of treatment provision and training
60% of participants had experienced TUPE	Participants valued being able to deliver alternative therapies	KSH said that competition between providers prevented them from sharing initiatives and resources
Three subgroups were identified in the LCA: Recovery Keyworkers, Prescribers and Non-Specific SMW	Participants' jobs contained a lot of administrative tasks that were regulation driven and regularly audited by managers. Many viewed theses as taking time away from service users	
The LCA subgroups did not differ by demographic or educational characteristics	Recommissioning was a common experience for SMW that disrupted all elements of service delivery and caused stress, fear and uncertainty among participants with few positive aspects	
Non-Specific SMW more likely to have an addiction-specific qualification	Supportive managers and good training provision were seen to be protective of stress but the capacity of both was reducing	

SMW = Substance misuse workers; KSH = Key Stakeholders; LCA = Latent class analysis

10 Results: Training experiences and needs

This chapter presents the results relating to substance misuse workers' (SMW) experiences of and needs for training. It covers SMW participants' experiences of current training provision, and identifies their self-reported training needs and preferences, alongside their training needs as identified by key stakeholders (KSH).

10.1 Objective 3: To understand the range and nature of training currently accessed by the substance misuse workforce

10.1.1 Quantitative survey results

The quantitative results (n=200) detail the most recent training course participants had attended and the perceived quality of that course. It is possible that courses reported here reflect training initiatives in place at the time of data collection rather than a representative list of training regularly accessed by participants.

When asked to identify the last training they had attended, 79 different courses were reported indicating a large range of training courses available to participants. 'Safeguarding' (children and/or vulnerable adults) was the most common training course and was named by 21 participants. The second most common course was management and leadership training, reported by 15 participants. Other well-represented courses included child sexual exploitation and group work training, each named by eight participants. Two participants reported attending administrative courses which were referred to as 'Excel work for you' and 'Paperwork'. The list of common courses is presented in Table 28 with Table 29 detailing all the courses in the survey data.

It is possible that training courses such as 'Group work training' include details about evidence-based practice. However, the most popular training course that directly related to an evidence-based therapeutic intervention was 'Motivational Interviewing' which was reported by just five participants (2.5%). Other evidence-based interventions such as Cognitive Behavioural Therapy (CBT) or Brief Solution Focused Therapy were reported by fewer than three (1.5%) participants each, a finding that supports suggestions from the qualitative data that a greater emphasis is placed on regulatory compliance than on therapeutic interventions.

Table 28: Most common training courses recently completed among survey participants (n=200)

Training course	Number of participants reporting this as the last training they attended *n* (%)
Safeguarding	21 (10.5)
Management / leadership training	15 (7.5)
Child sexual exploitation training	8 (4.0)
Group work training	8 (4.0)
Train the trainer	7 (3.5)
Assessments and care planning	6 (3.0)
Risk management training	6 (3.0)
Basic life support	5 (2.5)
Equality diversity and inclusion	5 (2.5)
Motivational Interviewing (MI)	5 (2.5)
Blood-borne virus's including Hepatitis and HIV*	4 (2.0)
Detox methodology	4 (2.0)
M-PACT*	4 (2.0)
Medication training	4 (2.0)

**Acronyms are reported as written by survey participants*

Table 29: Other training courses with fewer than three (1.5%) responses (n=200)

ADI training*	Managing suicidal contacts
Alcohol concern blue Light approach	Mediation skills
Aspire women's leadership	Mental Capacity Act
Acupuncture	Mental health / dual diagnosis
Acquired brain injury presentation	Mentoring
Brief Solution Focused Therapy	NMP Course*
Basic substance misuse training	Naloxone training
Boundaries	Needle Exchange
Breakin' free online	Non-medical prescribing
Cognitive Behaviour Therapy (CBT)	NVQ3 in Health and Social Care*
Care planning and risk	Nutrition and health
Chairing hearings	Over the threshold training: home visits
Chemsex	Paperwork
Child neglect	Performance management workshop
Conference	PMVA*
Conflict management	Presentation training
Deprivation of liberty	Prison training
Domestic violence	Professional curiosity refresher
End of life / complex needs training	RCGP drug misuse part 1*
Excel work for you	Recovery oriented systems of care
First aid training	Resus
Foundations of recovery training	Safer Injecting
Gestalt	Sexual violence and abuse awareness
Harm reduction	Shadowing
Health and safety	Solvent abuse and volatile substances
Hidden harm training	Strengthening families
LBGTQ, young people and mental health*	Toxic trio training
Legal highs	Trans awareness
Lofexidine training	VBI*
Lone working	Volunteer coordinator training
MMIR training*	Vulnerable women
Managing challenging behaviour	Working together
	Yoga

**Acronyms are reported as written by survey participants*

Participants rated the quality of the last training they had attended on a scale of one to ten, with ten representing the highest quality and one representing the lowest quality (Figure 8). The median score was eight with an interquartile range of six to nine. Over 50% of participants rated their last training as eight or above, and three-quarters said that they had been able to implement learning from their last training in their job (Table 30). These data indicate that SMW participants attend high-quality training in subjects that are relevant to practice. The quality of training, and participants' ability to implement training were analysed, but did not differ at $p<0.05$ between latent class subgroups, education level and years' experience.

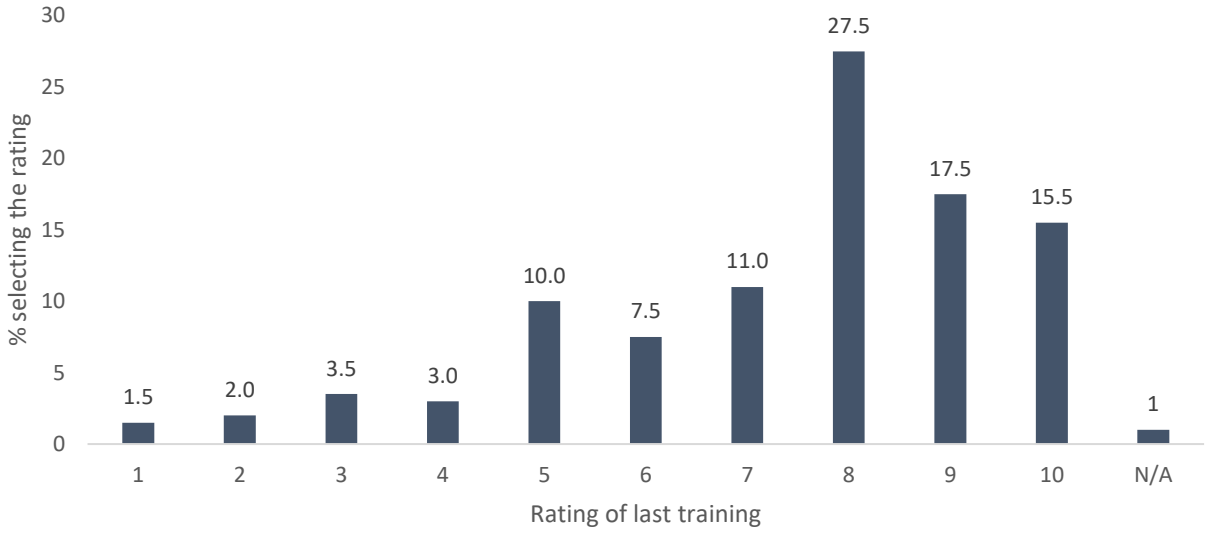

Figure 8: Rating of last training (n=200)

Table 30: The ability of participants to implement training in their job (n=200)

Could you implement your last training in your current job?	***n* (%)**
Yes	149 (74.5)
No	42 (21.0)
N/A	8 (4.0)
No response	1 (0.5)

10.1.2 Qualitative interview findings: Substance misuse worker participant's experiences of training

The range and nature of training attended by SMW interview participants (n=31) is described here and includes their perceptions of online training.

10.1.2.1 Training subjects completed by participants

Interview participants were not asked to list all training they had attended, rather training courses that they could recall (Table 31). As with the survey data, these data indicate a large number of training courses available for staff. Unlike the survey data it cannot be used to infer comparative popularity between courses. As with the survey data, the training courses in therapeutic interventions (such as Brief Solution Focused Therapy, CBT and MI) represent a small number of the training courses reported here.

Table 31: Training courses recalled by interview participants (n=31)

Acupuncture,	Managing suicidal patients
Assessment of recovery	Manual handling
Basic drug and alcohol training	Motivational interviewing (MI)
BBV testing	Naloxone training
Brief Solution Focused Therapy	Needle exchange
Case management system	Novel Psychoactive Substances
Cognitive Behavioural therapy (CBT)	Parents
Child sexual exploitation	Personal safety
Conferences	Policies and procedures
Court report writing	Professional boundaries
Dual diagnosis	Over the threshold
Equality and diversity	Resuscitation
Fire warden training	Risk management
First aid	Self-harm
Groupwork training	Safeguarding: Children, young and vulnerable adults
Health and safety	Stimulants
International Treatment Effectiveness Protocol (ITEP)	Supervising volunteers
Induction	Train the trainer
Information governance / data protection	Understanding substance misuse
Key-working skills	Understanding policy and theory
Management training	

10.1.2.2 How participants select training courses

Participants did not report attending training on a regular or routine basis. Rather training seemed to be accessed when needed or requested. Most participants said that they, rather than their manager, would select which training courses they wanted to attend, with those selections then approved by their manager. No participants reported having approval withheld by their manager, although some said that they would only request courses that were more likely to gain approval. Some participants said they discussed their training needs in supervision where they would also

consider the needs of the service in which they worked. In several cases the needs of the service seemed to drive the selection of training course.

> *"[We're] always evaluating what the service needs and what your skills need, if your skills need to change at all. So you know there might be drug trends, when NPS [novel psychoactive substances] for example you know it was like 'well you now need to get some training on that so you have a better understanding' and things like that."*
>
> *Margaret: Team leader*

Participants said that there were many basic training courses for new staff, but fewer for more experienced staff who could find it difficult to find training in advanced practice.

> *"INTERVIEWER: How often do you go on work-based training?*
>
> *PARTICIPANT: It's getting less and less and less. We have calendars which are very very comprehensive if you want to consolidate your existing learning. But if you want to progress or learn more."*
>
> *Nick: Non-specialist project worker*

Most participants said that their employer provided mandatory training for them to complete, and that these mandatory courses constituted a large part of their training. Participants said they received email notifications prompting them to complete mandatory training courses that were usually online. Mandatory training and online training are discussed in more detail in section 10.1.3 of this chapter.

10.1.2.3 Characteristics of learning and training undertaken at work

The main types of learning reported by participants were workshop training, online learning, peer learning, learning through experience at work and reflective practice. Despite being the basis for the commonly reported National Vocational Qualification (NVQ) in Health and Social Care, portfolio work was not discussed as a type of work-based learning. This omission supports findings in Chapter 9, where participants did not consider NVQs to be educational.

The term 'workshop training' was used to describe face-to-face training delivered to groups of SMW. Participants said that they enjoyed workshop training when it was interactive or experiential. Some said they disliked long, PowerPoint based training, indicating that the quality of workshop training could vary depending on how it was presented.

"I don't like being talked at….Um. I've been told off a few times for falling asleep in groups and stuff. So. I'm not the best learner. I'm more more and activist as well like I have to get involved."

Alf: Team leader

In addition to formal workshop, participants said they valued learning from their peers. Peer-learning typically involved observing or shadowing experienced staff, as well as learning through case reviews, informal discussions, structured team meetings, and supervision. Participants noted that shadowing was commonly organised for new staff and, although formal, was rarely structured around specific learning objectives. One participant thought that shadowing did not happen as much as it used to.

"I think by seeing how other people work. I think one of the benefits is - actually in the old days and I don't know if this still happens, is getting to shadow a multitude of different people, and not just the people in your service if you like, so it's going round and having the time and the experience to see how people work and then what you can do is you develop your own stuff."

Vanessa: Supported housing worker

Some participants said that they enjoyed workshop training because of the peer learning opportunities of meeting colleagues and sharing work experiences, indicating that different types of learning (in this case workshop training and peer learning) often co-occur in the same setting.

"So meeting up with other people from other projects and sort of thrashing things out and I do find that quite useful, because again it's about people's experiences and I think you can learn so much more from people than from being sat in a classroom so shadowing somebody in, who runs a methadone project, you'd be able to get a lot more from than sitting going 'so there's this and there's this and there's this'."

Becky: Young persons' outreach worker

Many participants valued learning through their working experiences, many referred to the value of being pushed *"into the deep end"* (Leena: Prison worker). Some participants talked about how much they had learned from service users and said that learning from experience was an essential part of staff development. Other participants raised concerns about the quality of work that was delivered by new staff during this learning process.

"I remember back to my first ever substance misuse job I was just like thrown in, And I could have been saying anything. I could have… the sessions could have been going any sort of way and no-one would have known."

Tony: Non-specialist project worker

These work-based experiences were often linked with reflective practice. Those that reported using reflective practice, cited a range of settings including case reviews in team meetings, reviewing service user feedback forms and structured reflective practice in their own therapy. Reflective practice was neither well-defined nor common across participant interviews, but those who used it deemed it to be of high value. Supervision was rarely mentioned as a setting for reflective practice.

10.1.2.4 Mandatory training

Mandatory training was also referred to as compulsory training and compliance training and seemed to be completed annually by all participants. Participants rarely referred to mandatory training courses as enjoyable or desirable, although mandatory Motivational Interviewing (MI) and CBT training were exceptions that participants seemed to have enjoyed. Most mandatory training was delivered online, and despite rarely enjoying it, most participants accepted the need to complete it.

"I'm quite adaptable, you've just got to do it don't you. I actually, the only thing was, when we got here, we were like told we had to do Moodle and stuff. All this e-leaning which we were like 'oh my God, really every year are you serious?' But yeah, it was fine."

Orla: Non-specialist project worker

Mandatory training subjects included assessments, blood-borne viruses (BBVs), CBT, data protection, desktop safety assessments, fire safety, health and safety, information governance, the Mental Capacity Act, MI, policies and procedures, safeguarding children and safeguarding vulnerable adults. Among these courses 'safeguarding' was the mandatory course most commonly recalled by participants. Although CBT and MI were included in the list of initial mandatory training courses, they were absent in participants' descriptions of annual refresher course. Mandatory training was predominantly related to risk management and regulatory compliance. Some participants said that annual refresher training in therapeutic skills would be helpful to prevent good therapeutic practice deteriorating over time. Some thought that overall addictions refresher training might be useful if it was able to update people on developments in addiction treatment.

"PARTICIPANT: You just forget, and you get pulled into your own style and your own way of working. You pull away from policies and procedures and what you should be doing.

INTERVIEWER: …Is that the kind of thing that the two hours again, you know 'We've got a refresher course on CBT or something' just a two-hour thing would be.

PARTICIPANT: Yeah absolutely, just a quick refresher, two hours, an hour whatever it takes and that could be in house."

Elsie: Non-specialist project worker

Analysis of the qualitative data suggested that participants perceived mandatory training as an audit for regulators such as the Care Quality Commission (CQC), rather than as a way for SMW to improve their skills. For some, the knowledge that training was driven by regulatory pressures diminished the motivation to learn on those courses, many viewing them as a waste of time.

"I haven't found them [mandatory courses] to be that useful. I think it's an organisational requirement to show that the organisation is keeping the skills up. In practical terms it makes no difference to me."

Isobel: Non-specialist project worker

Those issues notwithstanding, several participants said that mandatory training had had a positive impact on service provision. Perhaps the most notable example was of safeguarding, where the drive to be compliant was seen as contributing to changes in working practice and culture.

"Yeah, there was a big culture shift and, you know I, I was in [name of treatment provider organisation] in 2007 when they really decided to go for safeguarding and I think they were kind of ahead of the pack at the time and they had to introduce culture change and the culture change in retrospect was handled really well."

Nina: Non-specialist project worker

10.1.2.5 Training that is useful for work with service users

MI was seen as the most useful course for direct work with service users. Many participants felt that MI could improve interactions with service users and help to build motivation for change. MI was often described as a foundation on which more advanced therapeutic techniques could be built. One

participant thought that MI was misunderstood in addiction treatment and that, although regularly trained, it was rarely delivered by SMW with high fidelity.

> *"Motivational interviewing is a very misunderstood tool. I find. I think people do the training once and they're kind of 'OK every time have a chat with someone I'm doing MI'. You're really not, and that doesn't ever really get followed up on."*
>
> *Nick: Non-specialist project worker*

Participants also said that dual diagnosis training was important for work with service users and would also help improve liaison with mental health teams, something that many participants said they struggled with.

Other training that participants perceived to be useful for work with service users included CBT, drug awareness, group facilitation, safeguarding children and vulnerable adults and suicide awareness. Training in these subjects appeared to be less routine than mandatory training or training in regulatory compliance. However, it is interesting to note that many participants referred to 'safeguarding' training as useful for work with service users highlighting that regulatory compliance was not always perceived to be distinct from quality treatment for service users.

Participants said they valued training in alternative therapies such as acupuncture and mindfulness. The analysis indicated that the ability to overtly deliver an intervention to service users increased the value of those interventions. Participants enjoyed being able to 'give' something to service users and alternative therapies were perceived to be more immediate than therapeutic interventions.

> *"PARTICIPANT: I think because, you get almost instant feedback so for you it's the gratification of doing the.. and it's something different for a lot of clients. Especially people who've been in treatment 15, 20 years, and it's nice to give them something that's new, a different approach."*
>
> *Rachel: Non-specialist project worker*

10.1.2.6 Training that is useful for administrative work

Most participants said their job required substantial administrative skills and that training in these skills was important. Just one interview participant knew of available training for administrative skills, and no interview participants said they had completed any administrative training (although two survey participants (0.5%) had completed training in administrative skills). Despite this stated need for administrative skills, few participants said they were motivated to attend such training.

Most participants said they had learned to complete administrative tasks through shadowing other staff or by asking colleagues for help.

> *"Care plans, risk assessments I kind of worked to find my own way through that if you like.… you know someone coming into this field blind, it's almost, you have to ask, literally stop someone else from what they're doing to say 'how do you do this?' spend a lot of time doing that."*
>
> *Jenny: Non-specialist project worker*

Many administrative tasks concerned data entry and data management. Just one participant recalled having been shown how to complete these tasks by a data administrator; most did not recall any formal data training.

> *"And a lot of colleagues say 'oh I've become a data worker' without really being given the skills or how to do typing. So it's like just one finger and one gets better over a period of time."*
>
> *Harriet: Team leader*

One participant noted that their high levels of skills in using information technology enabled them to use clinical forms in a more flexible way than SMW with low levels of such skills. They said that their keywork and assessment sessions could be more flexible and focused on the needs of service users compared to their colleagues' sessions that were more restricted by the structure of forms that they had to complete. This contrast in key-working sessions demonstrates the impact that training in administrative skills could have on the treatment delivered to service users.

10.1.2.7 Enjoyable elements of training

Factors that made training enjoyable were grouped during analysis into themes of relatability, trainer quality, subject matter, learning, levels of interaction, and personal development.

Participants said they enjoyed training that was directly linked to their work. If the relevance of training to work with service users was explicit throughout training, then it was seen as high quality. Conversely, training in subjects that seemed to be irrelevant was perceived to be poor quality. Second to the relevance of the content was the impact of a trainer. Participants said that a charismatic, effective and energetic trainer could cause training to be highly enjoyable. Other participants said that they valued trainers who were subject matter experts and who did not rely on PowerPoint presentations. Some participants valued having a variety of individual exercises, group

exercises and discussions, saying that these elements made training feel more interactive and therefore more enjoyable.

Participants valued opportunities for personal development in training. Personal development seemed to relate to subjects that challenged participants' existing perceptions and that enabled them to reflect on their beliefs and behaviours. Some participants said that they felt uncomfortable with elements of personal development in training when they had had to use personal experiences as the subject of therapeutic role plays. Despite this discomfort, personal development was highly valued.

> *"That was good training, but, I remember being quite uncomfortable in that training because it was expected that we as learners would complete some of the maps and it gave you a kind of experience of what it's like to talk to a stranger about stuff that you've written on your map. It's very exposing, it's was quite useful actually in that respect."*
>
> *Nina: Non-specialist project worker*

10.1.2.8 Least enjoyable elements of training

The elements of training that participants found least enjoyable were those that acted as barriers to learning or that made training seem dull or irrelevant. Some participants said that the academic level of training was a cause of frustration. Some described training that had been too basic and repetitive for their abilities, and where they consequently did not learn anything. One participant suggested face-to-face training for staff who all had different educational characteristics would inevitably cause training to be unsuitable for some SMW. Many participants said they were frustrated by training that did not suit their preferred learning styles. Some participants were frustrated by high levels of theory in training, whereas others were frustrated by training with too many activities such as role play.

> *"I do love a bit of first aid training. It's always fun and just you know you're up doing stuff but it's not role play I hate role play."*
>
> *Lucy: Non-specialist project worker*
>
> *"You do it over two days. Well the first day and a half they just talk science. They talk about where it comes from what it does and stuff like that and you don't really care. Show me how to stick the needles in."*

Alf: Team leader

As well the level of the content, the quality of the trainer could be an issue. Participants recalled being frustrated by trainers who had a lack of subject matter expertise or who used out-of-date information. Some talked about being frustrated by trainers whose delivery style was 'boring', or who seemed to be unprepared.

"Personally, the training that is obviously a person from the training team who's been given a day's session on that thing and are regurgitating it. That for me is frustrating. Because like I say I've wasted a day and I could have just you could have just given me what you're reading from."

Becky: Young persons' outreach worker

Although face-to-face training was well regarded by staff, the occasionally unreliable nature of trainers could have an impact on the training experience. One participant recalled a trainer whose mood changed dramatically over a two-day training course, another trainer was described as so authoritarian that learners were intimidated, a further participant described having a strong emotional reaction to a trainer.

"INTERVIEWER: OK and are there any training that you can any training courses that you can remember that you disliked the most or that you liked the least?

PARTICIPANT: Yeah, conflict resolution we had. And I wanted to knock the fella out that was conflict resolution."

Audrey: Groupworker

In the same way that relevant training was valued, participants saw irrelevant training as frustrating or boring. Some subjects were viewed to be intrinsically boring or irrelevant such as first aid, 'form filling', health and safety, policies and procedures and using an Outlook calendar. These courses reflect the administrative training that many participants also saw as useful, indicating a conflict between perceptions of training that is useful, and training that would be interesting. Many of the training subjects that were considered to be irrelevant were those taught on mandatory training courses, with participants frustrated by having to complete training that fulfilled a regulatory need but that had few tangible benefits for them.

10.1.2.9 Retention of learning after participant in a training event

Some participants said that they were often unable to put the skills learned from training into practice on their return to work, saying that their memory of training would diminish over time. This contrasts with survey data indicating that three-quarters of survey participants felt able to implement their last piece of training at work. Interview participants said that their ability to deliver therapeutic interventions could diminish over time as old and more established working practices returned. One participant described the difficulty of establishing change in treatment delivery when work could be busy and demanding.

> *"I mean often you go and you do a bit of training and you're there aren't you and you're all like 'oh it's great and when I go back I'm going to,' you know, and then next day you go back and you've got like 100 emails to do and you know supervision and then before you know, a week or so has gone and you think 'oh God I haven't introduced any of them, what happened there?'."*
>
> *Margaret: Team leader*

10.1.2.10 Benefits from training other than knowledge and skills development

Participants said that training had often helped them build their self-confidence. Participants viewed general attendance at training as positive for their personal development, which in turn could build what was described as 'professional resilience'. This analysis indicated that training, regardless of subject, helped participants to build confidence and to cope with the stresses of the work as described above in section 9.3.3.5. Several participants said that attending training had helped them to feel valued by their employer.

> *"To provide you with more training makes you feel like you know you're worth something to the organisation for them to input that to you, you know, the financial cost, and I think you know it makes you feel that you're worth it and um, yeah and they want to help you sort of develop. I think that's a valuable sort of thing to be recognised and to think OK yeah my organisation believes in me and wants me to do better."*
>
> *Natalie: Non-specialist project worker*

Some participants said they would be motivated to attend courses that specifically trained staff on issues of confidence and personal development, and that such training might help reduce stress among SMW. One participant described how stress levels could compromise the quality of treatment provision.

"Our personal care of self, a lot of times is more important than CBT and MI and knowing that if you're not OK with, you know if your stress levels are high if this is high if that, do you know what I mean? CBT won't matter. You know, so learning to take care of self I think would be good staff training, better self-care."

Jenny: Non-specialist project worker

10.1.3 Qualitative interview findings: Substance misuse worker participants' experiences of online learning

Participants said that they accessed many organisational training courses online. Most of these seemed to be part of their organisation's mandatory training provision. The most commonly reported format of mandatory online learning consisted of a series of slides, on-screen reading material and a multiple-choice questionnaire at the end. Some participants had experienced online learning that used animations, videos and service user perspectives.

10.1.3.1 Positive experiences of online learning

Analysis of data identified three main themes describing factors that contributed to positive experiences of online learning. These were content, interactivity and flexibility.

Participants said they enjoyed online learning if the content was interesting, useful and challenging. Participants said that the addition of case studies in online modules helped to reinforce the relevance of the content to their work. Many said that that when the content of online learning was good, the format did not act as a barrier. Some participants valued online learning that was easy to use. Many participants also valued online learning that used a range of techniques including animations, case studies, slides and videos; some saying that interactive, game-like online learning could be fun.

"There was different like bubbles that you could sort of like pop and like that would have that information on it, and I really enjoyed that and I always say that, that was a really good, ….it was really interactive so it got your attention and we had to do it so we had, you know there was no doubt about it but it was just like 'oh God this is alright this is not boring it's, you know'."

Natalie: Non-specialist project worker

"Um, I've enjoyed the ones that are interactive, and you click on the screens and find bits and bobs. So it's a bit like a game really. I quite enjoy those."

Emma: Young persons' project worker

Some participants valued the flexibility of being able to access online learning without leaving their workplace. This meant that learning could fit around their work and could be completed at a time that was convenient for them. Participants also valued online training where they could pause and return to a course as necessary.

"I like e-learning as well. Because I can do that at my leisure. I actually enjoy e-learning."

Elsie: Non-specialist project worker

10.1.3.2 Negative experiences of online learning

Frustrations relating to online learning identified through analyses largely focused on content, interaction and setting, with content the stronger of the themes. Participants' views of online learning were often linked to their experiences of mandatory training.

Participants said that completing online learning based on boring or irrelevant content was frustrating. Participants also talked about being frustrated when the content of online learning was too simple or generic to be of use, or too complex to understand. Some noted that the lack of face-to-face contact meant that online learning content could not be adapted according to participants' needs. This relates to the analysis of face-to-face training where some participants identified the difficulty of adapting workshop training content for a group of learners with a wide range of education.

Interaction in online learning modules was perceived to be important by participants. A series of slides followed by a multiple-choice questionnaire was not considered sufficient to hold participants' attention; yet this form of module seemed to be very common. The text-based format of online learning deterred some participants who struggled with reading. One participant noted that her dyslexia contributed to her dislike of online learning.

"PARTICIPANT: I hate online learning.

INTERVIEWER: Why do you hate online learning?

PARTICIPANT: I think it's because I'm dyslexic, so I don't, it's not a way that I learn very well. I'm much more somebody that learns doing and somebody telling me and showing me."

Abby: Non-medical prescriber

Some participants said that they did not like sitting in front of a computer to learn. This was reportedly because of eyestrain, because computers made them feel sleepy, because online learning felt like work rather than learning, because they were distracted by other things happening in the office and because computers were *'too cold and clinical'* (Audrey: Groupworker) and therefore learning from computers was difficult.

10.1.3.3 'Gaming the system': Participants who only complete the end of module test

A common experience of online learning involved participants going through online module content as quickly as possible without reading any slides, before completing the end-of-unit test, hoping to score well enough to pass.

"You just whizz through literally 'yeah yeah yeah yeah yeah yeah and click click click click click' and do the test. Um there is a bit of me that every now and again it would be nice to have something that's going to be a bit more challenging. And then, you know, the face-to-face stuff tends to be a bit more challenging."

Jenny: Non-specialist project worker

Whist some participants accepted the need to complete mandatory courses and commented that it kept their organisation happy, others felt that this ability to 'game the system' negated the potential for learning from online modules. Analysis of interview data suggested that many participants viewed online learning as a way of their managers assessing and auditing SMW competence. Accordingly, the practice of completing end-of-unit tests without engaging in the training aligned with this view. Participants felt that, if they could pass the test without completing the learning, then they were competent and therefore met the needs of the organisation.

10.1.4 Qualitative interview findings; Key stakeholders' experiences of training

KSH (n=14) were asked about their experiences of attending and delivering training, as well as their experiences of online learning.

10.1.4.1 Key stakeholders' experiences of attending training as a participant

Most KSH had previous experience of attending and providing work-based training. As noted in Chapter 9, most KSH had previously worked in addiction treatment services. Many KSH said that a high-quality trainer was vital to the quality of training provision. One KSH said that a good trainer could teach them about anything; but that even the most fascinating subject, if taught by a poor-quality trainer, would not be interesting.

> *"PARTICIPANT: Oh God. No, I want to hear about anything. If I've got a trainer that's passionate about what they're talking about. Even if it's the widget in a Guinness can, their passion, the fact that they are so…. That engages me straight away. You could be talking about anything.*
>
> *INTERVIEWER: So like if that kind of thing is flipped around…if you have really really interesting training that's delivered by someone dull, can that still be interesting training?*
>
> *PARTICIPANT: No I don't think so."*
>
> *Sofia: Senior management (KSH)*

As with the SMW interviews, the relevance of training to work was important for KSH. One KSH said that she had received positive feedback from SMW after changing their training programme to be more reflective of working contexts.

> *"The shift from having off the shelf, which is good enough, to having something that is bespoke and contextualised makes a massive difference. It makes a big difference in terms of engagement because people… we got a lot of feedback from staff to say that they really liked the way that we'd contextualised it, so the case studies and the examples were absolutely relevant to a front-line practitioner."*
>
> *Denise: Training (KSH)*

KSH described low-quality training as delivered by trainers who would read through PowerPoint presentations with little interaction. Other characteristics of poor training as defined by KSH included training where they felt they had not learned anything, training based on a poor evidence or training using online methods where they were unable to interact with other participants. Online learning here was noted among KSH as form of training that was limited by its lack of interaction. That this was expressed by KSH who provide online learning partially explains the characteristics of online training as experienced by SMW. Specifically, that online learning is rarely interactive and often text, or information, based.

10.1.4.2 Key stakeholders' experiences of online learning

Analysis of the data suggested that KSH perceived online training to be effective for teaching information-based subjects where learners could take time to read and absorb large amounts of information. By comparison, KSH saw face-to-face training as effective for teaching skills where learners could practice through interacting with a trainer and with other participants. KSH acknowledged that the information-based nature of their current online learning provision could contribute to SMW negative perceptions of online training.

The benefits of online training from the perspective of KSH were that it was low cost, easy to access, flexible and could be used to provide niche courses for less popular subjects. One particular benefit of online learning reported by KSH was the ability to audit and monitor completion of mandatory training. KSH particularly valued this ability when there were legal or regulatory reasons for providing that training. In some cases, KSH said that the ability to demonstrate that training had been completed was more important than ensuring educational outcomes.

> *"INTERVIEWER: When everyone's done their yearly update in safeguarding are you as a manager confident that they're up to date on safeguarding?*
>
> *PARTICIPANT: I know that I'm up to date with the fact that everyone's signed off to say it and therefore if they've made a mistake then it's their fault and not mine…. Realistically I know from my own experience that you can do these tick box things…. And if someone's really interested in it they will take the time to learn it and do it properly. If someone wants to completely blag it they'll be able to blag it and you won't be able to tell the difference at the end I think, is the difference. So that doesn't mean that everyone's like that it just means that I wouldn't know as a manager who's… because everyone passes it because you have to pass it. So therefore, I don't know who's learned anything or not."*
>
> *Maya: Service manager (KSH)*

The benefit for KSH of being able to audit completion of online learning directly matched the perceptions of SMW participants that online learning was primarily used as an audit; a perception that legitimised the practice of skipping through the screens to complete the end of module test. Although online learning is provided as training, it was viewed, and often used, by both KSH and SMW participants as a skills audit.

10.1.5 Summary

The results relating to Objective 3 are summarised in Table 32. Participants leaned about addiction treatment delivery through formal training, on-the-job experiences and through peer-to-peer learning. Participants completed a wide range of training courses, a minority of which related to the delivery of therapeutic interventions. Participants valued training that was relevant to their work, specifically training in therapeutic interventions. There was a need for, but lack of interest in, administrative training. Most participants completed annual mandatory training which was usually online, driven by regulatory compliance and unpopular. Online learning allowed organisations to audit training completion, a practice that re-enforced SMW participants' views of online learning as an administrative task. Consequently, many SMW ignore the content of mandatory training and just completed the end of unit test.

The quality of the trainer was seen as the most important factor in ensuring the quality of face-to-face training, but for online learning, content relevance seemed to be the most important factor. Both KSH and SMW perceived online learning to be primarily for information-based subjects, with face-to-face training seen to be essential for skills-based subjects.

Table 32: Summary of results relating to Objective 3

To understand the range and nature of training currently accessed by the substance misuse workforce

Survey data	SMW Interview data	KSH interview data
Participants attended a large range of training	Participants accessed a large range of training, although relatively few courses were on evidence-based therapeutic interventions	The quality of the trainer was vital to high quality face-to-face training
Safeguarding was the most common training attended by participants	Training was mostly for new staff with fewer courses available in advanced practice. SMW often learned through their peers and valued learning through on the job experience	The direct relevance to treatment was important for training quality
Few participants reported regular training courses on evidence-based therapeutic interventions	There were many mandatory training courses; these were annual, online and often based on risk management and regulatory compliance. Few annual mandatory training courses were reported to be therapeutic	Online learning was not seen by KSH to be interactive and so was limited in its ability and mainly used for information-based subjects
Training was usually seen to be of good quality and could be implemented in treatment settings	Motivational Interviewing training was considered to be important as was dual diagnosis training	Online learning was seen by KSH to be low cost, easy to access and flexible
	There was low motivation for administrative training, despite its potential impact	KSH used online learning to audit compliance with mandatory training, this feature was highly valued
	High quality training was training that was relevant to work, that was delivered by a charismatic trainer and that involved elements of personal development.	
	Participants did not enjoy training that was too basic, or that was too advanced, that didn't meet their learning styles	
	Many said that it could be difficult to implement learning from training when working in busy services	
	Online learning was seen as high quality if it was relevant to work, interactive, game-like and flexible. It was seen as low quality if it was at the wrong educational level, irrelevant, lacking interaction and based on text. Some participants did not like learning on computers	

SMW = Substance misuse workers; KSH = Key Stakeholders

10.2 Objective 4: To identify the self-reported education and training needs of the substance misuse workforce

The quantitative findings related to this objective concerned participants' intentions to attend training, their interests in subject-specific training and their interests in broad areas of training. The qualitative results describe the training interests and needs of SMW participants.

10.2.1 Quantitative survey results

10.2.1.1 Intention to study

Of the survey participants (n=200) two-thirds (67%) planned to study in the next 12 months. The most commonly planned courses were safeguarding, management, groupwork skills and MI (Table 33). Although the most common response was that their next course would be whatever subject was identified as necessary reflecting the personalised training selection process also identified in the interview data. Compared to the survey data on current training provision (see Table 28 above), the popular courses that participants wanted to complete were more therapeutic in nature and included CBT, counselling, groupwork skills and MI. A large range of less common courses were also described and are summarised in Table 34.

Table 33: Most popular courses among participants intending to study (n=143)

Course title	***n* (%)**
Unspecified – as identified or required	17 (39.5)
Safeguarding	15 (34.9)
Management and leadership	12 (27.9)
Groupwork skills	10 (23.3)
Motivational Interviewing (MI)	9 (20.9)
Counselling	8 (18.6)
Boundaries	6 (14.0)
Dual diagnosis	6 (14.0)
Train the trainer	5 (11.6)
Cognitive Behavioural Therapy (CBT)	5 (11.6)

Table 34: Courses that fewer than five participants intended to complete (n=143)

Training course title	
APACS*	M-PACT family work*
Access to higher education	MA in substance use
Addictions related PhD	MSc in Cognitive Behavioural Therapy (CBT)
Addiction related degree	Mediation
Adult learner's qualification	Mental capacity act
Advanced alcohol training	Mindfulness
Acupuncture	NHS care certificate
Asist	NPS*
Brief Solution Focused Therapy	NVQ 3 Health and social care
Basic life support	Naloxone
Behavioural Couples therapy (BCT)	Non-medical prescribing
CAT*	Online therapy
CIM*	Over the threshold training
CSE*	PowerPoint
Care certificate	Prescribing
Cocaine	Procurement training
Clinical psychology doctorate	Prince 2
Clinical supervision	Psychosocial interventions
Compassion focused therapy	RCGP Substance misuse*
Complementary therapies	Record keeping
DA*	Research methods
Data training	Resus training
Detox training	Social care
Dry blood spot	Social worker degree
Domestic abuse	Suicide risk
EMDR*	Supervision
Equality and diversity	System1 training
End of life therapy	Therapeutic techniques
Engaging service users	Trauma
Fire training	VSE*
First aid training	Value based interviewing
Foundation degree	Volatile substances
Gestalt	Working with older clients
Health and safety	Working with sex offenders
HR Qualification	Working with complex alcohol clients
ITEP mapping	Yoga
Impact of addiction	
Incredible years	

**Acronyms are reported as written by survey participants*

10.2.1.2 Interest in training by subject

Subjects were identified as a training need if participants had received either 'no training', or 'some training but would like more'; if participants reported 'sufficient training' or 'training irrelevant or not wanted' then the subject was not identified as a training need (Table 35). The data suggested

that there were high levels of training need for Behavioural Couples Therapy (BCT), Contingency Management (CM) and psycho-stimulants. Over two-thirds of participants (37%) had had no training in BCT and half (50%) had had no training in CM despite these being recommended by National Institute for Health and Care Excellence (NICE) guidelines. Over half (52%) of survey participants perceived themselves to have a low need for naloxone training. Despite being identified as a high priority for training in this analysis, BCT was rarely mentioned in the qualitative interviews as a training need, perhaps indicating the different choices made by participants when guided by list of training, compared to the choices made without such guidance.

Table 35: Training subjects by level of need, multiple choices could be made (n=200)

	Training need *n* (%)		
Training subjects	**Training need** (no training, or insufficient training)	**Low training need** (sufficient training or training not wanted)	**No response**
Behavioural Couples Therapies (BCT)	171 (85.5)	28 (14.0)	1 (0.5)
Contingency Management (CM)	168 (84.0)	32 (16.0)	0 (0.0)
Domestic abuse	131 (65.5)	69 (34.5)	0 (0.0)
Education training and employment	144 (72.0)	55 (27.5)	1 (0.5)
Hepatitis	124 (62.0)	76 (38.0)	0 (0.0)
Naloxone for overdose prevention	92 (46.0)	107 (53.5)	1 (0.5)
Novel psychoactive substances	139 (69.5)	60 (30.0)	1 (0.5)
Psycho-stimulants (such as methamphetamine)	165 (82.5)	33 (16.5)	2 (1.0)

There were differences in identified training needs between the latent class subgroups (Table 36). Eighty percent of Non-specific SMW had a training need for 'education, training and employment' training compared to 60% of Recovery Keyworkers (X^2 (2, n=200) = 6.774, p=.034). Nearly 95% of Prescribers had a training need in BCT, compared to 75% of Recovery Keyworkers and 89% of Non-specific SMW (X^2 (2, n=200) = 10.148, p=.006). Ninety-four percent of Prescribers were interested in CM training, compared to 88% of Non-specific SMW and 70% of Recovery Keyworkers (X^2 (2, n=200) = 14.188, p=.001).

Prescribers were the subgroup that had a highest need for training in BCT and CM. Members of the Non-specific SMW group had the highest need for training in 'education, training and employment' than the other groups. Recovery Keyworkers had the lowest identified training needs for all types of training.

Table 36: Training need in subjects by latent class subgroups (n=200)

Training need *(either no training or insufficient training)*	Latent Class Subgroup *n* (%) Recovery Keyworkers	Non-specific SMW	Prescribers	X^2	Sig.
Behavioural Couples Therapies (BCT)	48 (75.0)	72 (88.9)	51 (94.4)	10.148	p= .006
Contingency management (CM)	45 (70.3)	72 (87.8)	51 (94.4)	14.188	p= .001
Domestic abuse	35 (54.7)	57 (69.5)	39 (72.2)	4.975	p= .083
Education training and employment	39 (60.1)	65 (80.2)	40 (74.1)	6.774	p= .034
Hepatitis	35 (54.7)	50 (61.0)	39 (72.2)	3.884	p= .143
Naloxone for overdose prevention	28 (44.4)	37 (45.1)	27 (50.0)	0.430	p= .807
Novel psychoactive substances	41 (65.1)	60 (73.2)	38 (70.4)	1.117	p= .572
Psycho-stimulants (e.g. methamphetamine)	47 (74.6)	71 (87.7)	47 (87.0)	5.079	p= .079

Degrees of freedom = 2 for all analyses; SMW = Substance misuse worker

When training needs were arranged from highest to lowest priority for each latent class, those training needs were largely similar, with the exception that Recovery Keyworkers had a lower need for training on CM, and a higher priority on training in psycho-stimulants. BCT was the highest priority and naloxone and hepatitis the lowest priority for all latent classes.

Training needs were also analysed for differences among participants according to education level, but no differences were found, indicating that both the level, and subjects, of training needs were not related to participants' education. There were differences in training needs between participants according to experience working in addiction treatment services (Table 37). Participants with under two years' experience had more training needs related to hepatitis than those with between two and five years' experience (X^2 (2, n=200) = 9.801, p=.007). They also had more training needs relating to domestic abuse than participants with more working experience (X^2 (2, n=200) = 7.791, p=.020).

Table 37: Training needs of participants with different duration of addiction work experience (n=200)

	Years' experience working in addiction treatment *n* (%)				
Training need	**Under two years**	**Two to five years**	**Over five years**	X^2	**Sig.**
Behavioural Couples Therapies (BCT)	27 (90.0)	24 (82.8)	120 (85.7)	0.658	p=.720
Contingency management (CM)	28 (93.3)	23 (79.3)	117 (83.0)	2.528	p=.283
Domestic abuse	25 (83.3)	22 (75.9)	84 (59.6)	7.791	p=.020
Education training and employment	23 (76.7)	23 (79.3)	98 (70.0)	1.369	p=.505
Hepatitis	25 (83.3)	21 (72.4)	78 (55.3)	9.801	p=.007
Naloxone for overdose prevention	17 (56.7)	11 (37.9)	64 (45.7)	2.133	p=.344
Novel psychoactive substances	20 (66.7)	23 (79.3)	96 (68.6)	1.485	p=.475
Psycho-stimulants (such as methamphetamine)	26 (86.7)	25 (89.3)	114 (81.4)	1.32	p=.517

Degrees of freedom = 2 for all analyses

10.2.1.3 Interest in training by subject area

Data on the broad (rather than subject-specific) areas of training (Figure 9), showed high levels of interest in dual diagnosis training, intervention techniques and interpersonal therapeutic skills. The lowest levels of interest were in training for administrative skills, models and formulations and assessment skills. The low level of interest in administrative training adds depth to qualitative data that emphasised the importance of administrative skills in delivering addiction treatment, but low motivation for completing such training. Despite being the least popular training subject, 17% of participants had considerable or maximum interest in administrative skills training.

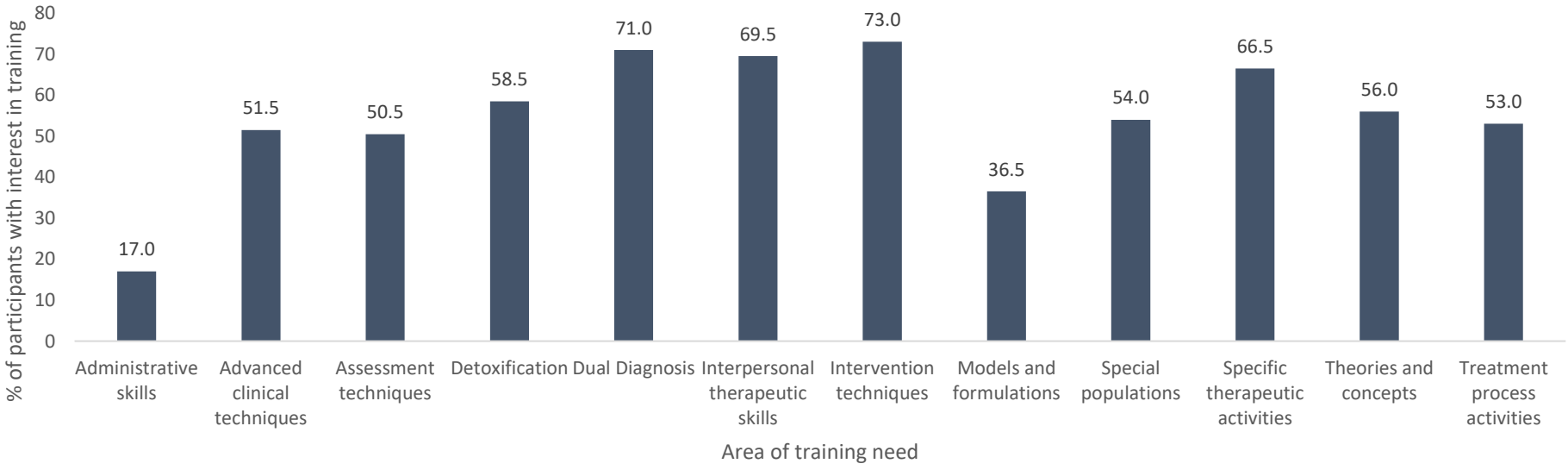

Figure 9: Considerable or maximum interest in training by subject area (n=200)

Interest in training areas differed between the latent class subgroups (Table 38). Prescribers were more likely to be interested in theories and concepts (X^2 (2, n=200) = 7.390, p=.025), interpersonal therapeutic skills (X^2 (2, n=200) = 11.732, p=.003) and specific therapeutic activities (X^2 (2, n=200) = 13.291, p=.001) than members of other subgroups. Non-specific SMW were more likely to be interested in treatment process activities (X^2 (2, n=200) = 11.11, p=.004), advanced clinical techniques (X^2 (2, n=200) = 9.770, p=.008) and dual diagnosis (X^2 (2, n=200) = 12.493, p=.002) than Recovery Keyworkers and Prescribers. Recovery Keyworkers had less interest in training than the other groups on all measures.

Table 38: Considerable or maximum interest in the following areas by latent class analysis subgroup (n=200)

	Latent Class Subgroup *n* (%)				
Training area	**Recovery Keyworkers**	**Non-specific SMW**	**Prescribers**	***X²***	**Sig.**
Administrative skills	12 (18.8)	15 (18.3)	7 (13.0)	0.860	p= .651
Advanced clinical techniques	26 (40.6)	53 (64.4)	24 (44.4)	9.770	p= .008
Assessment techniques	32 (50.0)	43 (52.4)	26 (48.1)	0.249	p= .883
Detoxification	33 (51.6)	53 (64.6)	31 (57.4)	2.566	p= .277
Dual Diagnosis	35 (54.7)	66 (80.5)	41 (75.9)	12.493	p= .002
Interpersonal therapeutic skills	35 (54.7)	59 (72.0)	45 (83.3)	11.732	p= .003
Intervention techniques	40 (62.5)	64 (78.0)	42 (77.7)	5.266	p= .072
Models and formulations	21 (32.8)	32 (39.0)	20 (37.0)	0.608	p= .738
Special populations	30 (46.9)	51 (62.2)	27 (50.0)	3.873	p= .144
Specific therapeutic activities	33 (51.6)	55 (67.1)	45 (83.3)	13.291	p= .001
Theories and concepts	28 (43.8)	47 (57.3)	37 (68.5)	7.390	p= .025
Treatment process activities	27 (42.2)	55 (67.1)	24 (44.4)	11.11	p= .004

Degrees of freedom = 2 for all analyses; SMW = Substance misuse worker

Interest in areas of education varied according to the level of education of participants (Table 39). Participants with higher levels of education were more interested in advanced clinical techniques (X^2 (1, n=200) = 4.361, p=.037), models and formulations (X^2 (1, n=200) = 12.547, p<.001), and theories and concepts (X^2 (1, n=200) = 7.168, p=.007), indicating that education had an influence on areas of training interest but not on subject specific needs. Participants with higher levels of education seemed to be more interested in the theoretical elements of training than in the subject specific intervention related training courses.

Table 39: Considerable or maximum interest in the following areas by education level (n=200)

	Level of education *n* (%)			
Training area	**Degree or over**	**All other levels of education**	***X²***	**Sig.**
Administrative skills	15 (13.5)	19 (21.3)	1.630	p=.202
Advanced clinical techniques	65 (58.6)	38 (42.7)	4.361	p=.037
Assessment techniques	59 (53.2)	42 (47.2)	0.484	p=.487
Detoxification	63 (56.8)	54 (60.7)	0.172	p=.679
Dual Diagnosis	82 (73.9)	60 (67.4)	0.711	p=.399
Interpersonal therapeutic skills	81 (72.0)	58 (65.2)	1.075	p=.300
Intervention techniques	84 (75.7)	62 (69.7)	0.627	p=.429
Models and formulations	53 (47.7)	20 (22.5)	12.547	p<.001
Special populations	67 (60.4)	41 (46.1)	3.507	p=.061
Specific therapeutic activities	73 (65.8)	60 (67.4)	0.009	p=.924
Theories and concepts	72 (64.9)	40 (44.9)	7.168	p=.007
Treatment process activities	63 (56.8)	43 (48.3)	1.095	p=.295

Degrees of freedom = 1 for all analyses;

Participants' training interests also differed according to their length of addiction treatment working experience (Table 40). Participants with over five years' experience had less interest than participants with under five years' experience in assessment techniques (X^2 (2, n=200) = 10.047, p=.007), interpersonal therapeutic techniques (X^2 (2, n=200) = 7.626, p=.022), specific therapeutic activities (X^2 (2, n=200) = 6.876, p=.032), theories and concepts (X^2 (2, n=200) = 6.922, p=.031) and treatment process activities (X^2 (2, n=200) = 20.454, p<.001). It is unsurprising that participants with less treatment delivery experience had greater interest in several areas of training, a situation that contrasts with interview data about the lack of training for experienced staff. This diminished

training availability reported in the interviews seems to be accompanied by lower levels of interest among experienced SMW participants in attending training.

Table 40: Considerable or maximum interest in the following areas by years' experience working in addiction treatment (n=200)

	Years' experience working in addiction treatment *n* (%)				
Training area	**Under two years**	**Two to five years**	**Over five years**	***X²***	**Sig.**
Administrative skills	3 (10.0)	7 (24.1)	24 (17.0)	2.089	p=.352
Advanced clinical techniques	19 (63.3)	11 (37.9)	73 (51.8)	3.824	p=.128
Assessment techniques	20 (66.7)	20 (69.0)	61 (43.3)	10.047	p=.007
Detoxification	22 (73.3)	22 (75.9)	73 (51.8)	8.948	p=.011
Dual Diagnosis	24 (80.0)	22 (75.9)	96 (68.1)	2.095	p=.351
Interpersonal therapeutic skills	26 (86.7)	23 (79.3)	90 (63.8)	7.626	p=.022
Intervention techniques	27 (90.0)	25 (86.2)	94 (66.7)	9.835	p=.007
Models and formulations	10 (33.3)	7 (24.1)	56 (39.7)	2.671	p=.263
Special populations	20 (66.7)	14 (48.3)	74 (52.5)	2.451	p=.294
Specific therapeutic activities	25 (83.3)	22 (75.9)	86 (61.0)	6.876	p=.032
Theories and concepts	23 (76.7)	13 (44.8)	76 (53.9)	6.922	p=.031
Treatment process activities	20 (66.7)	25 (86.2)	61 (43.3)	20.454	p<.001

Degrees of freedom = 2 for all analyses

10.2.2 Qualitative interview findings: Substance misuse worker participants' training needs and interests

Many of the training needs for new and existing SMW have been covered by the data on existing training provision. Therefore, those data are summarised here and expanded on where they provide information specific to SMW training needs.

10.2.2.1 Training needs of new substance misuse workers

SMW interview participants (n=31) were asked about training that they thought was most important for new SMW. The data analysis identified five themes relating to this issue: experience and shadowing, drug awareness, therapeutic approaches, regulatory requirements and administrative skills.

Participants said that learning from peers or through shadowing was important for new SMW, saying that this type of learning was important for learning how to interact with service users. Some participants said that learning from direct interactions with service users was also a valuable way of developing those skills.

Participants said that there were several training modules that would be important for new SMW. Drug awareness was commonly mentioned, and many participants considered a basic knowledge of how drugs worked to be essential. Some participants said that drug awareness could be learned directly from talking to service users about their experiences. Others were more cautious about this approach saying that if new staff were open about their lack of drug specific knowledge that might impair trust between new staff and old service users.

> *"I think for someone new coming into the field, it can be quite scary and because there's quite a lot of addictions out there, if you don't know what you're talking about, that person will tell you and that's going to be very embarrassing, so yeah, basic drug awareness should be at the forefront and a basic induction into the drugs world so to speak. I think that would be very valuable before there's any actual contact with the clients."*
>
> *Elsie: Non-specialist project worker*

After drug awareness, participants said that MI was important for new SMW and was considered by many to be a foundation on which other therapeutic approaches could be built. Some participants said that learning MI helped SMW to develop communication skills and that the ability to define and hold boundaries was an essential therapeutic skill. One participant said that holding good boundaries could prevent burnout and would allow SMW to work effectively with chaotic service users.

> *"I find that if people don't have the boundaries training it kind of catches up on them a bit…..You know we work in a very chaotic field and if you don't learn those boundaries from quite an early start I've seen many people burn out and you know if you've got a caseload of 60 and you take all of that home."*
>
> *Rachel: Non-specialist project worker*

Other specific training courses that participants considered essential for new SMW included CBT, Cycle of Change, harm reduction, mental health, mindfulness, Royal College of General Practitioners (RCGP) training, recovery and relapse prevention.

Participants said that it was important for SMW to understand the wide number of regulatory frameworks relevant to addiction treatment provision. The most common subjects referred to were safeguarding children and safeguarding vulnerable adults; terms routinely abbreviated by participants to just 'safeguarding'. Participants said that safeguarding training was essential for all new SMW in order to keep them and their service users safe. Some said that any SMW unaware of the principles of safeguarding could cause harm through omission (i.e. by not reporting risk of harm appropriately) and that they should not have any contact with services users until safeguarding training was complete.

The importance of administrative skills to addiction treatment work were discussed in Chapter 9, Many participants highlighted the importance of good administrative skills for new SMW but noted that there were few opportunities for SMW to learn them in formal settings and that they were more commonly learned through trial and error.

10.2.2.2 Training needs related to working with service users

The training that participants considered to be most useful for their work with service users and for administrative work have been discussed above in sections 10.1.2.5 and 10.1.2.6. They are therefore summarised here where they are relevant to SMW training needs.

Participants saw MI as an important training need because of its contribution towards developing positive relationships with services users. They also considered dual diagnosis training to be important because of working with service users who had mental health problems. Reflective practice was valued by participants as an important skill that helped them to continually improve their own skills. Despite this importance, no participants reported formal training in reflective practice. This high perceived importance combined with low levels of provision indicates a strong training need in reflective practice. Other training needs highlighted by interview participants included training in alternative therapies, auricular acupuncture, assessment skills, advanced alcohol awareness, Brief Solution Focused Therapy, claiming benefits, CBT, cannabis, psychotherapy / counselling skills, drug awareness, domestic violence, equality and diversity, Eye Movement Desensitisation and Reprocessing Therapy, family-based therapies, group facilitation, health and safety, housing, how to put together a service user file, International Treatment Effectiveness Protocol (ITEP), mindfulness / relaxation, needle exchange, novel psychoactive substances / legal highs, 'Over the threshold', safeguarding, safer injecting, suicide awareness and self-harm.

10.2.2.3 Training needs related to administrative work

Participants said that training in administrative work was important and useful but rarely completed. Furthermore, that such training could improve addiction treatment delivery. Despite this perceived importance, usefulness and need, there were consistently low levels of enthusiasm for training in administrative subjects throughout the interviews.

10.2.2.4 Ongoing and refresher training

Participants said that annual refresher courses were based on regulatory requirements and were therefore viewed as a necessary task rather than an opportunity for education. Some participants said that there was a need for ongoing refresher courses in therapeutic skills and interventions saying that these would be valuable for maintaining good therapeutic skills and preventing loss of learning following training. No participants said they completed annual refresher training in therapeutic interventions.

10.2.2.5 The importance of training for developing therapeutic relationship skills

Many participants said that there was a need for training in building and maintaining good therapeutic relationships. Many commented that a good therapeutic relationship was central to addiction treatment delivery and a foundation on which other therapeutic work could be built. Statements that reflect the importance placed on MI training. Despite its perceived importance, no participants reported having ever had training in developing therapeutic relationships. There were mixed views among participants about whether therapeutic relationship skills could be taught; these skills were perceived to include communication skills, curiosity, empathy, having a sense of humour, interpersonal skills, listening skills, non-judgemental practice, personal and professional development, reflective practice and the ability to build rapport. The data analysis suggested that participants viewed the therapeutic relationship to be more important than specific therapeutic interventions.

> *"I think actually how to talk to people. Or how to listen to people actually and really hear what they're saying and building up a rapport and a relationship because, for me, it almost you know and whether it's because I'm getting old and cynical it's it almost doesn't matter what the treatment is I feel any more it's the relationship the person builds up with you that helps them."*
>
> *Vanessa: Supported housing worker*

Many participants said that, although they could not be taught, therapeutic relationship skills could be developed through experience, through observing colleagues and through trial and error. Some participants felt that MI training could help develop these skills. Participants' own personal development, and in some cases therapy, was also seen as helpful in developing therapeutic relationship skills. Despite these potential sources of learning, many participants commented that good therapeutic relationship skills could be difficult to learn for some SMW who were not naturally good at communicating.

> *"Er, I think it probably comes more naturally to some people than others, I'm sure those people that it does come naturally to are probably attracted to these sort of careers. Um, so maybe you know maybe some people don't need training in that sort of thing. But I think it's helpful. Or it would be helpful if it was part of the, you know."*
>
> *Tony: Non-specialist project worker*

One participant said that building good therapeutic relationships had, over time, become less important for addiction treatment work, with SMW becoming increasingly focused on practical case management tasks. Some participants commented that if a service user needs to be referred to housing services then administrative skills rather than therapeutic relationship skills were most important.

10.2.2.6 Benefits from training other than knowledge and skills development

From this analysis, the ability to manage stress, burn out and change were cited by participants as training needs for which there was also no training available. Many thought that professional resilience was built through attending training on many different topics and through working experience.

10.2.3 Summary

Objectives 4 and 5 are summarised together below, in section 10.4.

10.3 Objective 5: To identify the education and training needs of the substance misuse workforce as identified by key stakeholders

This objective was met by qualitative data from KSH only. These data described training, skills and attributes that KSH participants perceived to be important for SMW.

10.3.1 Qualitative interview findings: Key stakeholder participants' perceptions of substance misuse workers' training need

10.3.1.1 Training needs relevant to new substance misuse workers

The analysis of KSH interview data (n=14) identified four themes relating to skills or attributes that were considered important for new SMW: mandatory training, treatment interventions, administrative work and treatment principles.

The range of mandatory training provided to SMW was described in section 10.1.2.4 above. KSH saw mandatory training courses as important for the safety of addiction treatment and for meeting regulatory requirements. Subjects included equality and diversity, health and safety, information governance and safeguarding. These training needs were routinely, and annually met; their mandatory nature ensured that they were provided by organisations and completed by SMW.

In line with SMW, many KSH saw MI as important for new staff, saying that it provided a basis from which other treatments and interventions could be delivered. Several commented that MI helped SMW to develop good communication skills. Other treatment approaches considered important for new staff included BCT, Brief Solution Focused Therapy, care planning, CBT, harm reduction and ITEP mapping.

As with SMW participants, KSH also talked about the importance of good administrative work including paperwork and record keeping. Some noted the legal nature of emails and reports underlining why administrative training is important. One KSH said that they had a range of administrative training available for all staff ranging from formal online modules to informal help.

> *"Data entry, yes we do train people on that, I don't personally, that's down to um, [name of data analyst] and, well, [they do] quite a lot of work around that I think as well. Um, you know for those sorts of things we use the people that know."*
>
> *Ben: Training (KSH)*

Several KSH highlighted principles of treatment that were not therapeutic but that were important for new staff to understand. These principles included accountability, boundaries, dealing with homelessness, managing difficult situations, principles of empowerment, reflective practice, risk assessment, substance specific training, understanding addiction, understanding of evidence, understanding the organisation and whistleblowing. One KSH said that these principles and values were more important than therapeutic skills and abilities for new staff, because principles and values were more difficult to train than skills and abilities.

> *"We don't just do a competency interview now we do a VBI interview, so a values-based interview, um, because we think that's the harder bit to…. Well you can teach the competencies, but we can't necessarily teach the values."*
>
> *Michael: Senior management (KSH)*

These perceptions match with those of some SMW participants who said that personal characteristics could be more important to treatment delivery than skills learned through training.

10.3.1.2 Training needs relevant to experienced substance misuse workers

Reflecting the data from the SMW interviews, KSH acknowledged that there were fewer training opportunities for experienced than for new SMW; and that advanced or ongoing training needs were rarely met. Training needs for experienced SMW as seen by KSH were categorised during analysis into five themes: advanced courses, self-directed learning, administrative skills, mandatory training and therapeutic relationship skills.

The absence of advanced training for experienced staff has been noted previously. Some KSH said they were in the process of creating advanced courses for experienced staff, but few courses existed at the time of the interviews. One KSH commented that their organisation did not have any advanced training because of the practical limitations of providing long and in-depth training courses.

> *"INTERVIEWER: Do you get any interest from people who say want to do advanced MI or advanced…*
>
> *PARTICIPANT: Yeah there are, yeah we do get that kind of…. All we can provide is like two days of MI, I'd love to be able to provide something more."*
>
> *Ben: Training (KSH)*

KSH described a range of advanced courses that they thought would be valuable for experienced SMW but that they were unable to provide. These included acupuncture, advanced counselling techniques, use of disulfiram, methadone optimisation, self-development tools, theoretical understandings of addiction and understanding the issues around enforcement of drug laws.

Several KSH suggested that training and development for more experienced staff should occur through supervision, peer-learning and mentoring rather than through formal training. This contrasts with SMW data suggesting that supervision was rarely used for reflection or personal development and that opportunities for formal peer learning or mentoring for experienced SMW were rare. Several KSH placed the responsibility for ongoing training on SMW themselves, saying that more experienced SMW should take control of their own self-development and that reflective practice was central to this kind of learning. As with the SMW participants, no KSH identified formal training that would be helpful for developing reflective practice.

> *"Yeah well you've got all your core stuff that needs, you know, your mandatory training stuff has to be there doesn't it. I mean there's no way around that. But if you're asking me what personally I feel is important. I think that reflective practice I think that's, that's the core, getting people to embed in their practice that they have to question everything that they do and why they do it and understand the impact on people. Because I think that gets, I think that can get lost."*
>
> *Trevor: Policy (KSH)*

KSH felt that administrative skills training was as important for experienced staff as it was for new staff. Basic writing skills were routinely raised as important for writing reports, case notes and interagency communication. One KSH commented that good administrative skills helped staff report, record and refer service users in safeguarding incidents, arguing that good administrative skills can keep service users safe. Many KSH, however, acknowledged that administrative training was not a priority.

> *"We make an assumption, I make an assumption that somebody's walked through the door and got the job that they can write an email, write a report. … So if I said 'oh Rob needs training in risk assessment' they'd go yep yep yep, here we go. But if I said 'oh actually Rob needs some help with how he puts together reports and stuff' they'd go 'oh can't you do that?'... People write God knows what, people don't realise that e-mails are a legal document, coroner's reports that kind of stuff."*
>
> *Sofia: Senior management (KSH)*

The importance of mandatory training is discussed in Section 10.1.2.4. KSH acknowledged that mandatory training was unpopular but said that it was essential for organisations wishing to comply with regulatory and legal requirements. KSH said that mandatory training met an important organisational need.

In line with the views expressed in the SMW interviews, many KSH said that therapeutic relationship skills were essential for delivering effective treatment. Some KSH thought that without a good therapeutic relationship, it would be impossible to deliver any therapeutic interventions or treatments. Therefore, KSH saw therapeutic relationship skills as an important training need for all staff with service user contact. Some KSH said that general communication skills, manners and customer care were all part of building therapeutic relationships. As with the SMW interview data, some KSH expressed doubt about how and whether therapeutic relationship skills could be trained.

> *"INTERVIEWER: And do you think that's something that you can train that ability to talk to people gain a therapeutic relationship those things.*
>
> *PARTICIPANT: No, I don't think… no I think it… I don't know I think you've either got it or you haven't really."*
>
> *Tessa: Regulatory work (KSH)*

10.4 Summary

The results relating to Objectives 4 and 5 are summarised in Table 41. Training needs priorities for new SMW included training on boundaries, drug awareness, MI, safeguarding and building therapeutic relationships. Training courses based on therapeutic principles were of value and were considered to be relevant to SMW work. There was an identified need for training on advanced subjects with most training provided for new staff. Many participants acknowledged the importance of administrative work but were unmotivated to attend training in it. Therapeutic relationship skills, reflective practice and managing stress were all perceived to be important and unmet training needs; although some participants doubted whether therapeutic relationship skills could be taught.

KSH emphasised the importance of mandatory training for new and experienced staff whilst acknowledging that it was regulation driven. MI was perceived to be central to treatment delivery, as were therapeutic relationship skills, but no training was identified on the latter. Values and personal characteristics were seen by some to be more important than skills and knowledge for

delivering high quality addiction treatment. Administrative skills were also highly valued, but training rarely provided.

Table 41: Summary of results relating to Objective 4 and Objective 5

To identify the self-reported education and training needs of the substance misuse workforce		**To identify the education and training needs of the substance misuse workforce as identified by key stakeholders**
Survey data	**SMW Interview data**	**KSH interview data**
66% of participants planned to study in next 12 months There were high training needs in BCT and CM Training priorities varied by LCA subgroups but not substantially Training interests were mostly in therapeutic skills with low levels of interest in administrative skills Participants with high levels of education were more interested in training on theoretical approaches Participants with a lot of working experience had less interest in all types and subjects of training that newer SMW	Training in drug awareness, MI, CBT were important for new staff. Experience on the job and shadowing more experienced staff were also seen as important Participants were interested in training on therapeutic approaches including MI and CBT Many participants thought that training in meeting regulatory requirements was important, particularly 'safeguarding' training Administrative training was seen as a need, but few participants were motivated to attend such training MI, dual diagnosis and reflective practice were seen as the most important training subjects for work with service users Many saw the value of refresher training in therapeutic skills, but none reported received such training There was a need for training in therapeutic relationship skills, but some doubted these could be taught There was a need for stress management training	KSH prioritised mandatory training in safety and regulatory compliance for new SMW KSH considered MI to be the most important intervention-based training Administrative training was seen as important by KSH for the safety of service users, but many acknowledged that it was low priority Some thought the characteristics of SMW were more important than the skills they developed in training For experienced SMW, KSH thought that advanced courses were important but rarely available because of the practical difficulty of training long courses for small numbers of people Many KSH thought that experienced SMW should ensure their own self-directed learning KSH acknowledged that mandatory training was unpopular among SMW, but stated that it was organisationally important KSH also placed importance on therapeutic relationship skills, but did not report any training for developing them

BCT = Behavioural Couples Therapy; CM = Contingency Management, KSH = Key Stakeholders; LCA = Latent class analysis; MI = Motivational Interviewing; SMW = Substance misuse workers;

11 Results: Barriers, facilitators and motivations for accessing training

This chapter will summarise the barriers and facilitators to accessing training for substance misuse workers (SMW) and describe how those barriers and facilitators differ according to training context and SMW characteristics. It will discuss barriers to training provision as experienced by key stakeholders (KSH). Finally, it will summarise factors that motivated participants to attend training, and factors that motivated organisations to provide training.

11.1 Objective 6: To understand the barriers and facilitators to accessing addiction education and training as experienced by the substance misuse workforce

The quantitative data in this section will present findings on common barriers to training, participants' preferred learning methods and difficulties experienced when accessing the internet. The qualitative data will explore the detail around barriers and facilitators to training as well as describing the disruption to training associated with recommissioning. KSH interview data will describe barriers to training provision.

11.1.1 Quantitative survey results

11.1.1.1 Reasons for non-attendance at training

In the survey data (n=200), the most common reasons for participants being unable to attend training were having too many other work commitments, that the type of training they were interested in was not available, and that the location of training was inconvenient (Figure 10). Only nine participants (4.5%) agreed or strongly agreed with the statement that 'I had no interest in participating in training', indicating that a lack motivation is not a strong barrier for training attendance. Few participants (11%) agreed or strongly agreed that previous training had been a waste of time. Analysis suggested that the reasons for non-attendance at training did not differ with

education level but did with years' experience working in addiction treatment (Table 42). Participants with between two and five years' experience were more likely to say that not knowing what training they needed was a barrier than participants with under two years or over five years' experience (X^2 (2, n=200) = 12.731, p=.002). Participants with under two years' experience were more likely to cite a lack information about training availability as a barrier than participants with over two years' experience (X^2 (2, n=200) = 6.708, p=.034).

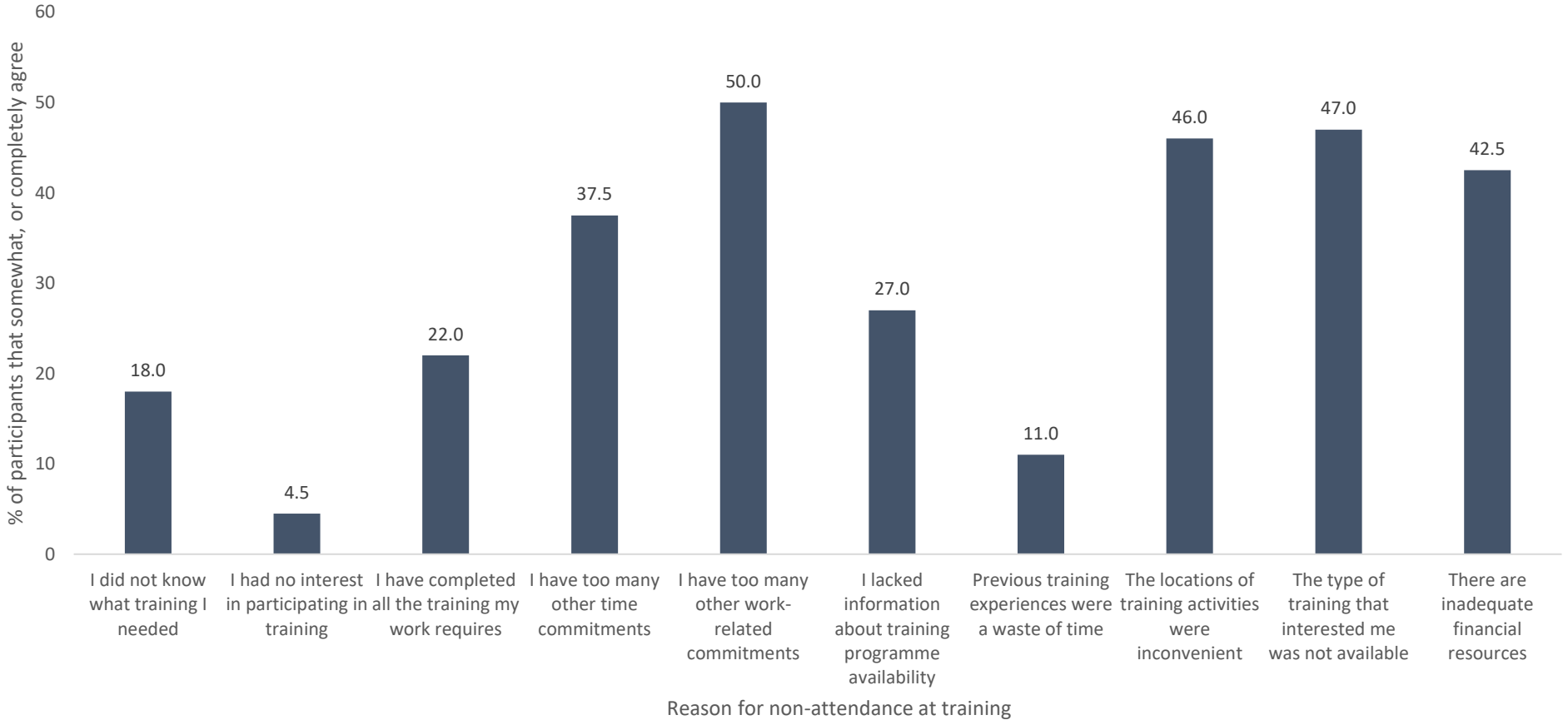

Figure 10: Reasons for non-attendance at training (n=200)

Table 42: Reasons for non-attendance at training by different years' working experience working in addiction treatment (n=200)

Reason for non-attendance at training *(somewhat or completely agree)*	**Years' experience working in addiction *n* (%)**				
	Under two years	**Two to five years**	**Over five years**	X^2	**Sig.**
I did not know what training I needed	5 (16.7)	12 (41.4)	19 (13.5)	12.731	p=.002
I had no interest in participating in training	0 (0.0)	2 (6.9)	7 (5.0)	1.872	p=.392
I have completed all the training my work requires	6 (20.0)	5 (17.2)	33 (23.4)	0.615	p=.735
There are inadequate financial resources	12 (40.0)	12 (41.4)	61 (43.3)	0.125	p=.939
I lacked information about training programme availability	12 (40.0)	3 (10.3)	38 (27.0)	6.708	p=.034
The locations of training activities were inconvenient	14 (46.7)	13 (44.8)	65 (46.1)	0.021	p=.989
Previous training experiences were a waste of time	1 (3.3)	5 (17.2)	16 (11.3)	2.973	p=.226
I have too many other time commitments	10 (33.3)	7 (24.1)	58 (41.1)	3.226	p=.199
I have too many other work-related commitments	11 (36.7)	15 (51.7)	74 (52.5)	2.515	p=.284
The type of training that interested me was not available	17 (56.7)	17 (58.6)	60 (42.6)	3.817	p=.148

Degrees of freedom = 2 for all analyses

Barriers to training were broadly similar across latent class subgroups (Table 43). Recovery Keyworkers were, however, more likely to have completed all the training their work requires (X^2 (2, n=200) = 10.653, p=.004), a finding that does not identify whether their job has lower training requirements than the other two groups or whether they have greater provision of, or access to training.

Table 43: Reasons for non-attendance at training by latent class subgroups (n=200)

Reason for non-attendance at training *(somewhat or completely agree)*	**Latent Class subgroup *n* (%)**				
	Recovery Keyworkers	**Non-specific SMW**	**Prescribers**	X^2	**Sig.**
I did not know what training I needed	14 (21.9)	12 (14.6)	10 (18.5)	1.290	p=.524
I had no interest in participating in training	6 (9.4)	2 (2.4)	1 (1.9)	5.231	p=.073
I have completed all the training my work requires	21 (32.8)	9 (11.0)	14 (25.9)	10.653	p=.004
There are inadequate financial resources	25 (39.1)	36 (43.9)	24 (44.4)	0.459	p=.795
I lacked information about training programme availability	18 (28.1)	20 (24.4)	15 (27.8)	0.319	p=.852
The locations of training activities were inconvenient	22 (34.4)	41 (50.0)	29 (53.7)	5.300	p=.071
Previous training experiences were a waste of time	8 (12.5)	9 (11.0)	5 (9.3)	0.314	p=.855
I have too many other time commitments	24 (37.5)	29 (35.4)	22 (40.7)	0.401	p=.818
I have too many other work-related commitments	31 (48.4)	40 (48.8)	29 (53.7)	0.408	p=.816
The type of training that interested me was not available	24 (37.5)	38 (46.3)	32 (59.3)	5.591	p=.061

Degrees of freedom = 2 for all analyses; SMW = Substance misuse worker

11.1.1.2 Preferred learning methods

Participants' preferred learning methods were attending external training courses (89%) internal training courses (71%) and attendance at conferences or seminars (65%) (Figure 11). Conference attendance was all but absent from the qualitative data, suggesting a form of learning that may not be considered but that was popular when participants were prompted. The least preferred learning methods were open and flexible learning programmes (32%), job rotations and secondments (35%) and action learning (36%). Online learning was the fifth most preferred method and was favoured by 46% of participants.

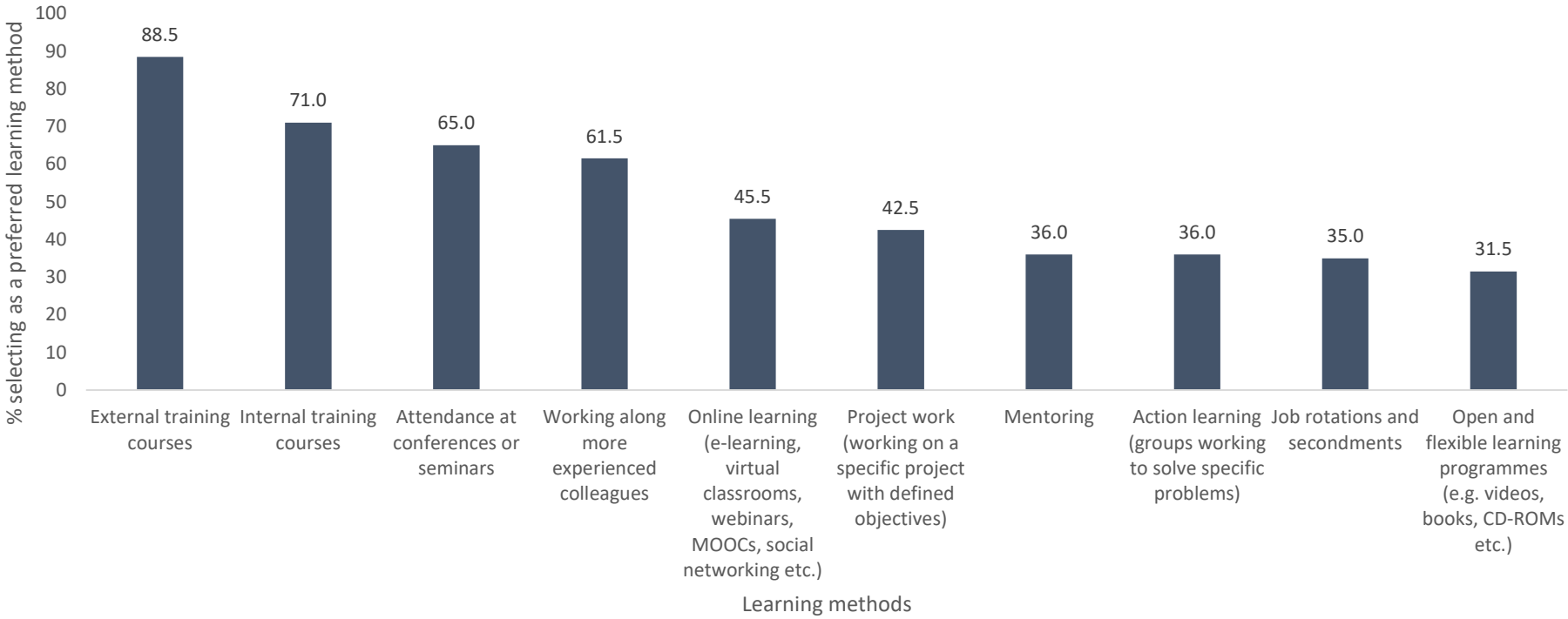

Figure 11: Preferred learning methods. Multiple selections were possible (n=200)

Participants' preference for online learning did not differ between latent class subgroups; nor did it differ according to education and working experience (Table 44). The data presented in Chapter 12 (section 12.4) indicate that there were differences between the digital literacy of those who preferred online learning methods, with a higher mean digital literacy associated with a preference for online learning, (t(183) = -3.73, p<.001).

Table 44: Online learning as a preferred learning method by latent class analysis subgroups, Education and Experience (n=200)

	Online learning as a preferred method			
Participants	***n* (%)**	**df**	**X^2**	**Sig.**
Latent class subgroups				
Recovery Keyworkers	30 (46.9)			
Non-specific SMW	35 (42.7)			
Prescribers	26 (48.1)	2	0.464	p=.793
Experience				
Under two years	16 (53.3)			
Two to five years	14 (48.3)			
Five years or more	61 (43.3)	2	1.117	p=.572
Education				
Degree or above	46 (41.4)			
All other qualifications	45 (50.6)	1	1.310	p=.253

df = Degrees of freedom; SMW = Substance misuse worker

11.1.1.3 Access to the internet

Under half the survey participants had their own computer with full internet access (47%), and a quarter shared their desk or computer with colleagues (25%). Just over a quarter (27%) had unreliable, slow, partial or restricted access to the internet. There were no participants without access to the internet at work (Table 45).

Table 45: Internet access at work (n=200)

Access to internet technology	***n* (%)**
'I have my own computer with full internet access'	94 (47.0)
'I share my desk / computer with other staff (hotdesking)'	50 (25.0)
'I have access to the internet, but the connection is slow and /or unreliable'	16 (8.0)
'I have partial access to the internet (sites are restricted / no sound / no videos)'	37 (18.5)
'I have no access to a computer or the internet at work'	0 (0.0)
Missing data	3 (1.5)

Access to online technology differed between latent class subgroups (Table 46). Sixty four percent of Recovery Keyworkers had their own computer compared to 42% of Non-specific SMW and 33% of Prescribers (X^2 (2, n=200) = 12.595, p=.002). Prescribers were more likely than the other groups to experience slow or unreliable internet connection (X^2 (2, n=200) = 6.889, p=.032) and Non-specific SMW were more likely to experience blocks or restrictions on their access to the internet (X^2 (2, n=200) = 7.872, p=.020).

Table 46: Internet access at work for each latent class analysis subgroup (n=200)

	Latent class subgroup *n* (%)				
Internet access at work	**Recovery Keyworkers**	**Non-specific SMW**	**Prescribers**	X^2	**Sig.**
"I have my own computer with full internet access"	41 (64.1)	35 (42.3)	18 (33.3)	12.595	p=.002
"I share my desk / computer with other staff (hotdesking)"	16 (25.0)	17 (20.7)	17 (31.5)	1.782	p=.410
"I have access to the internet, but the connection is slow and /or unreliable"	1 (1.6)	7 (8.5)	8 (14.8)	6.889	p=.032
"I have partial access to the internet (sites are restricted / no sound / no videos)"	5 (7.8)	21 (25.6)	11 (20.4)	7.872	p=.020
"I have no access to a computer or the internet at work"	0	0	0	N/A	N/A
Missing data	1 (1.6)	2 (2.4)	0 (0.0)	N/A	N/A

Degrees of freedom = 2 for all analyses; SMW = Substance misuse worker

11.1.2 Qualitative interview findings: Substance misuse worker participants' barriers and facilitators to training

11.1.2.1 Barriers to training

Analyses of SMW interview data (n=31) identified five barriers to training for SMW. These were time, availability of advanced training, money, home life and the location of training. Participants discussed several barriers to training that were related to recommissioning processes; these were analysed separately.

The most common barrier to training was a lack of available time; often related by participants to having a high workload. This reflects the survey findings where other work commitments and a lack of time were common barriers to training. Participants said that they were often unable to take time out of work to attend training, and that their workload was too high for them to complete training at work. Several participants said that they had completed training in their own time, having been unable to do so during work hours.

> *"Who do you cancel? What phone call are you going to refuse to take? …It's just a nightmare. So most of mine was done at home. In fact, 90% of my NVQ level 3 was done at home."*
>
> *Jenny: Non-specialist project worker*

Many participants said that they were reluctant to attend training because of the impact it would have on their work colleagues who would be required to complete extra tasks in their absence. The difficulty of arranging cover was more acute in specialist roles where specialist cover might have to be arranged and paid for.

> *"Because we are such a small team. Um, it's very very difficult to even, we can't… when one of us is off there's two of us running the whole programme for the day which is really difficult. Not difficult it's manageable but, it's tiring but but after a week you're a bit frazzled."*
>
> *Audrey: Groupworker*

In addition to not having time, many participants said that there was no available training in subjects that interested them. This was commonly related to advanced training courses for more experienced participants. Some participants said that, although advanced courses were advertised in organisational training brochures, they were not always available; and that they would often have to wait until the course was full before it would be run.

> *"There's a few training courses that I want to get on at the moment but it's just like getting the numbers up. One of them has actually just been cancelled. So um, just waiting."*
>
> *Pumula: Non-specialist project worker*

As well as availability, participants said that a lack of money could act as a barrier to training. No participants said they had had a training application rejected because of insufficient funding, but many were aware that the cost of training could be difficult for their service to cover and this prevented them from applying for multiple or costly training courses.

Some participants said that their home life impeded their ability to attend training. Participants with young families said they often struggled to attend training due to childcare commitments and were unable to travel long distances to attend training because to do so would make them late for picking up their children.

> *"So I work Tuesday, Wednesday, Thursday, so it could be on a Monday or a Friday and I can't sort my childcare out. So it, there's lots of barriers to training."*
>
> *Becky: Young persons' outreach worker*

The location of training was also a barrier for participants who worked in remote locations. Many of these participants said that travel to training courses could cost too much or be too time-consuming to fit into a day.

11.1.2.2 Facilitators to training

The data analysis identified four factors that improved access to training: accessibility, management support and organisational culture, regulatory drivers and cost.

Participants said that training delivered at their place of work was easy to access. The lack of travel and the brief nature of some online courses meant they could also be fitted around work.

> *"Ok, well the FutureLearn ones have all been online. And the reason I did those was because I didn't have to travel anywhere, it was all in my own time I could plan how to do it when I wanted to do it. And other ones were one day courses where you might have to go somewhere."*
>
> *Harriet: Team leader*

Almost all participants needed their manager's approval to attend training. For some participants this meant that their managers had the ability to prevent, or encourage, attendance at training. Some managers were described as very supporting and would arrange staff cover and pay for travel in advance. Participants often commented that their manager's support for training reflected the organisational culture in which they worked. One organisation was described as having a culture that promoted and supported training, whereas other organisations were noted as having very little interest in training. Working for a manager and an organisation that supported training was seen as facilitating access to training.

Organisational training priorities were often based on regulatory requirements and were often then mandatory. Accordingly, regulatory requirements acted as a facilitator to training, with mandatory training widely accessible, encouraged and indeed mandated. Some participants also said that if training was recommended by the Care Quality Commission (CQC) then it would be provided.

Some participants said that training that would save money for a service was often encouraged. One participant said that non-medical prescribing training could reduce the need for a service to employ an expensive member of staff such as a doctor or a nurse and would therefore be seen by their manager as cost-effective training. It would therefore be likely to be funded.

> *"If it's relevant and valid to this workplace they would definitely fund it I would have thought unless it was terrifically expensive. And it's, it could be terrifically expensive even if it's*

immensely valid and they could fund me to be a non-medical prescriber which is basically a cheap doctor..if that makes any sense."

Jamie: Nurse

11.1.2.3 Disruption to training from recommissioning

Some participants said that recommissioning processes disrupted their access to training, and that training programmes had been cancelled whist recommissioning occurred. One participant said that training was disrupted because money and time for training was no longer made available by their employer organisation during recommissioning. This was partly attributed by participants to their organisations prioritising recommissioning activities over staff development.

"At the time, there wasn't much training going on to be fair. And I think because they were trying to get the TUPE completed, so there was, I don't think we did any training for a good six months to be honest, so and we were told not to book. I remember being told not to book any training until it was completed."

Elsie: Non-specialist project worker

"Yeah, and. So at the moment training seems to have dried up because of the recommissioning cause there's no point in starting things off."

Paula: Non-specialist project worker

11.1.3 Qualitative interview findings: Key stakeholder participants' barriers and facilitators to training provision

11.1.3.1 Barriers to training

Through analyses of the KSH interview data (n=14), six barriers to training provision were identified: lack of staff time, lack of demand from staff, influence of managers, organisational culture, money and location and organisational capacity to design training.

In line with the SMW participant data, the barrier to training most commonly raised by KSH was the problem of releasing staff from services to attend training. KSH talked about the difficulty of arranging cover for staff that attended training. One KSH said that the problem of arranging cover had become more acute as services had become less well staffed.

"Just having to alter your operations on the day and look at things like cover and … because of the way we operate and it's quite tight in terms of rota duties as well as client load as well as everything else."

Maya: Service manager (KSH)

Another barrier to training that mirrored those raised by SMW, was that training providers needed enough SMW enrolled on a course before it was deemed viable to run. KSH said that this was partially financially driven because providing training for low numbers was expensive. The need for sufficient numbers in training courses made it difficult for KSH to deliver training in niche subjects in which few SMW might be interested. One KSH said that, in order to get sufficient numbers enrolled, they sometimes had to 'sell' training to staff by making it sound exciting.

"For instance, care planning. You call a training 'care planning' and nobody's coming on it, nobody's volunteering to come on it. You know and it's something that's going to be mandatory anyway because it's that important. So we're talking about, you know different ideas about what we can call something, you know, um, 'supporting clients to excellence' or something you know (laughs)"

Ben: Training (KSH)

As with the SMW interviews, many KSH said that service managers could support or block training attendance among SMW. Some KSH said that persuading managers of the merits of training was as important as persuading SMW themselves. Most KSH had worked for different addiction treatment organisations during their career and noted differences in training provision between those organisations. One KSH recalled working for an organisation that had allocated SMW a specific number of training days each year in order to encourage attendance at training. Another KSH recalled an organisation that viewed attendance at training as a punishment for underperforming staff.

"And I think there's sometimes an issue around attitudes towards the idea of training and people's perception of what it is. And sometimes managers perceptions of what it I, um is that, you've done something wrong so I'm going to send you on training. It's like training as a punishment."

Ben: Training (KSH)

KSH also talked about practical issues that could prevent training provision. Sometimes the location of training meant that services and organisations would have to fund travel and accommodation for SMW to attend. There were further associated service delivery costs associated with training attendance in terms of arranging staff cover and SMW accruing time off in lieu (TOIL – where time worked outside of regular working hours is subsequently taken as annual leave). These were all issues that managers were acutely aware of.

> *"Um, and then that's without you know if the training is flippin' miles away then they'll build up TOIL as well (laughs)…Yeah when I hear that the training's in [name of local town] I'm like 'oh thank God'."*
>
> *Maya: Service manager (KSH)*

One KSH commented that the amount of time it takes to write good quality training prevented him writing large numbers of courses. This comment was made in reference to both online and face-to-face training.

11.1.3.2 Facilitators to training provision

The factors that facilitated training attendance and provision from the perspectives of KSH largely comprised a removal of those barriers discussed above.

The most common factor that made training easy to provide was having the support of service managers. As detailed above, resistance from managers could act as a barrier to delivering training. Whereas support from senior managers, area managers as well as service managers could facilitate training delivery. Similarly, a negative organisational culture could deter training provision, whilst a positive one could promote training. Online learning seemed to be popular among managers because it could reduce the demands on staff time and the need to arrange cover. Most online learning was driven by regulatory requirements and, as discussed above, those regulatory drivers could themselves act as drivers for training.

11.1.3.3 Willingness of substance misuse workers to change.

Several KSH compared SMW to service users. This was particularly focused on staff who were reluctant to attend training or to change their working practice. This observation was often made in relation to older, more experienced, staff whose working practices were viewed as habitual. One KSH commented that the emphasis on risk management in addiction treatment over the past 15

years had created a shared language about risk management, but that there was no shared language about change and how to manage change. This lack of cohesion about the nature and process of change was identified as a barrier to implementing change at all levels of service delivery including provision of and attendance at training.

> *"I don't know how many services had a kind of clear, theoretical, shared language of what a shared change process was. And you know a lot of clinical meetings they could talk quite happily about risk, but if you said 'well where are you on some sort of cycle'. I don't know, not a cycle of change but on some sort of change paradigm. 'Where are you and what are you doing and how are you going to get on to the next stage', or, you know support them or, not make them, do you know what I mean? But and I don't think there was much shared understanding or narrative about that."*
>
> *Trevor: Policy (KSH)*

11.1.3.4 The absence of a single mandatory qualification

KSH were asked why they thought there was no single mandatory qualification for SMW. Many KSH recalled missed opportunities to implement a mandatory qualification in the previous 20 years. Some KSH talked about the development of Drug and Alcohol National Occupational Standards (DANOS), and how, despite their development, they had failed to become universally adopted and were now rarely referred to. Some participants said that the drive for staff having an NVQ level three in Health and Social Care, as driven by the National Treatment Agency (NTA), had become less important for provider organisations when the NTA closed.

> *"I don't know, and I think it is the most… it is ridiculous. You know we've spent years. I've worked in the sector for 16 and a half years. We've spent a lot of time trying to professionalise substance misuse and get that professional recognition. Um, and part of that I think the NTA recognised this, and I think that's why they put in the requirement for a minimum of a level three, and then obviously the NTA just disappeared and it seems to have disappeared out of contracts and all sorts of different things. So, in terms of the why, I don't know. It doesn't make any sense to me on any level."*
>
> *Denise: Training (KSH)*

Most KSH thought that a mandatory addiction treatment qualification would improve treatment quality. As well as ensuring minimum levels of training, some KSH thought that it would have

benefits such as improving staff retention and making Transfer of Employment – Protection of Earnings (TUPE) processes easier by standardising workforce qualifications. Some KSH also said that a standardised qualification would make it easier to audit the skills of the workforce.

> *"Hopefully it [a mandatory qualification] would drive the standards up a bit. I think there's probably variable training from what I'm gathering, and so I think it would, and then if you set it at a higher educational level, at the moment it's around [NVQ level} three so say this meeting agreed on an educational level four that would mean a better educated workforce, understanding evidence base more. For them, they can move around organisations more easily hopefully it would improve staff retention. A lot of people coming to the sector are people who've been through treatment services so it's a kind of career progression for them. Hopefully just providing a higher standard for the service users in the end."*
>
> *Lauren: Independent training*

Other KSH were cautious about the opportunities of professionalising the substance misuse workforce, saying that a registered profession would not guarantee treatment delivery standards, noting that low-quality treatment exists in sectors with registered professions. One KSH said that training was not always the best way to improve standards, and that SMW just needed to be caring and passionate rather than skilled or registered. A perspective that mirrors data from SMW interviews about personal qualities being more important for treatment delivery than skills learned through training or education.

> *"You need a lot of qualifications in other fields. I think you just have got to have the passion and I think people who perhaps work with people with substance misuse recognise that it's the passion and it's the commitment and it's the caring and this really isn't just about £20,000 at the end of the month or £60,000 at the end of the month for a salary, this is about wanting to care, wanting to support and help and empower people. Um and I don't know if any qualification would give you that to be honest."*
>
> *Karen: Senior management (KSH)*

A lack of money was also identified as a factor that would impede the implementation of mandatory qualifications. Some KSH said that qualified staff cost more, and that unqualified staff can often do the same jobs and were therefore preferable in terms of providing value for money. This was particularly highlighted with the example of non-medical prescribers being less qualified but cheaper than medical prescribers as described by a commissioner.

"Drug worker time, bluntly is cheaper than Nurse time, and I don't think there's anything wrong with that from a provider or a commissioner perspective. We have to get the best value for money we possibly can. The fear would be, I imagine, I don't think it would be particularly my fear, but I think there would be a fear that if people had to be professionally registered, they could become more expensive or there'd be less opportunity to use volunteers peer mentors, volunteers all of these kind of extra resources and that it would therefore limit what you could – how much service you'd get for the budget you've got."

Mark: Commissioner (KSH)

Some KSH talked about a lack of political will being a barrier to the implementation of mandatory qualifications. They suggested that without political backing for improved standards in addiction treatment, there were few incentives for staff skills development. These KSH suggested that the lack of political support was related to stigma towards addiction.

"I don't think it's given the respect it deserves. Or the patients … are not given the respect they deserve. And I just don't think it's ever a priority for anybody…So I don't think people care about this group. If a drug user dies as a result of some doctor fucking up that ain't going to make front page news. If somebody with something else, depression, I think it would now it probably wouldn't have done ten years ago. Do you see where I'm coming from?"

Sofia: Senior management (KSH)

A final note from one KSH was that they saw the treatment sector as having been divided, with medical and professional staff working for NHS trusts, and non-medical, non-professional staff working in third-sector organisations. Accordingly, efforts to professionalise third-sector SMW would reduce the benefit to commissioners of using those organisations.

"If you think of the sector of being almost a kind of two track system, so it's got this um, high professionalised medicalised arm, where you have things um, you have nurses nursing qualifications you have medical qualifications, um, and there were very distinct courses like GP with a special interest and those sorts of things. There's nurses will look to become, some of them if that's the way the kind of progression appeals to them, non-medical prescribers that there's kind of these qualifications and boxes to tick and so on. And then there's the third-sector where there just isn't that at all."

Mark: Commissioner (KSH)

11.1.4 Summary

The results relating to Objective 6 are summarised in Table 47. Barriers to training included a lack of available time to attend training, and difficulties attending training in distant locations. Training in advanced subjects was rarely available and recommissioning often disrupted access to training. The support of managers and organisations could prevent or facilitate access to training, this support was often influenced by regulatory drivers, money and organisational cultures. Facilitators to training often involved the removal of those barriers; online learning was seen to address barriers of location and time. SMW can be unmotivated to attend training, and do not always know what training they need. Some staff and services struggle with change; some KSH thought that addiction treatment services and organisations were uncertain about how to manage change.

The lack of a single mandatory qualification for SMW was generally viewed as a barrier to quality improvement, although some KSH doubted whether it would improve standards. Barriers to implementing a mandatory qualification mostly concerned money with qualified staff costing more than unqualified SMW. Some KSH thought that addiction treatment was too complex a subject to condense into one qualification. Some KSH talked about a lack of political will and public support for quality improvement in addiction treatment.

Table 47: Summary of results relating to Objective 6

To understand the barriers and facilitators to accessing addiction education and training as experienced by the substance misuse workforce

Survey data	SMW Interview data	KSH interview data
Participants' barriers to training included too many other work commitments, the type of training was not available, and the locations were inconvenient. A lack of motivation was not a common barrier Recovery Keyworkers (from the LCA) were more likely to have completed all the training their job required than the other subgroups Participants' preferred learning methods were external training, internal training and attendance at conferences Online learning was the fifth most popular form of learning with 46% of participants considering it a preferred learning method Online learning as a preference did not differ by LCA subgroup, education or experience, but was associated with differences in digital literacy Just 47% of participants had access to their own computer at work	Barriers to training included a lack of time and too much work, that training courses of interest were not available (mostly with reference to advanced courses), insufficient money, home life (mostly with reference to childcare) and location Recommissioning processes often prevented SMW accessing training Facilitators to training included improved access (either by being locally delivered or online), manager support and organisational backing, or if the training met regulatory requirements Training that saved costs to an organisation was also valued (i.e. non-medical prescribing)	Barriers to training as identified by KSH included releasing staff from services, low interest among SMW, resistant managers or organisational cultures, TOIL and location (costs to the service) and time to write training Facilitators to training mostly involved removal of those barriers. Online learning was seen to help improve access to training. Training that met regulatory requirements was also easier to provide A lack of sector-wide shared language about change was identified as a barrier to change KSH thought a mandatory qualification or professionalised workforce would be beneficial but was unlikely to happen. DANOS had been useful, but were rarely referred to now KSH saw a mandatory qualification as good for improving treatment and thought it would be good for SMW too. Although some KSH thought that it would not necessarily ensure standards Some KSH were worried that professionalising the workforce would cost money and that it might come at the expense of treatment capacity Some KSH noted a lack of political will to improve the quality of addiction treatment provision

SMW = Substance misuse workers; KSH = Key Stakeholders; LCA = Latent class analysis

11.2 Objective 7: To identify what motivates substance misuse workers to access addiction education and training

The quantitative data in this section describe the career goals of participants. The qualitative data describe what motivated participants to attend education and training as well as discussing factors that improved or diminished motivation for attending training.

11.2.1 Quantitative survey results

11.2.1.1 Career goals

As described in section 9.3.1.1, 58% of survey participants (n=200), intended to stay in their current position over the following two years (Table 48). Over a third (36%) said they intended to seek promotion within their existing organisation and a quarter (26%) intended to seek a different position within their current organisation.

Table 48: Job intentions in the next two years. Multiple selections were possible (n=200)

Job intention	***n* (%)**
Stay in current position	117 (58.5)
Seek a promotion within your current organisation	71 (35.5)
Seek a different position in your current organisations	52 (26.0)
Seek a position in another third-sector substance misuse organisation	35 (17.5)
Seek a position in an NHS substance misuse service	25 (12.5)
Leave the substance misuse sector	27 (13.5)
Undertake full time study	10 (5.0)
Take maternity leave	4 (2.0)
Retire	7 (3.5)

The training subjects and subject areas that survey participants would be motivated to attend are displayed in Figure 9 and Table 35. Two thirds of SMW participants intended to study over the next 12 months and said that this would most probably be driven by identified need. Popular training subjects included Behavioural Couples Therapy (BCT), Contingency Management (CM), dual diagnosis, intervention techniques and therapeutic skills with low interest in administrative skills, theories and models and assessment skills. Participants with higher levels of education were more

interested in training on theoretical approaches than participants with low levels of education. Participants who had worked for longer in addiction treatment services were less interested in all types of training that SMW participants with under five years' working experience.

11.2.2 Qualitative interview findings: Substance misuse worker participants' motivation for training

11.2.2.1 Motivation for education and training

Through analysis of interview data (n=31), five motivators for education and training were identified: career progression, work-related motivation, personal development, mandatory training attendance and the enjoyment of learning. These themes do not describe individual subjects of interest but focus on what motivated participants to attend training. The subjects that participants were motivated to attend are described in section 10.2.1.2, and included boundaries, Cognitive Behavioural Therapy (CBT), Motivational Interviewing (MI), and substance-specific training courses.

Participants' most common motivations for training were related to career progression. Some participants had specific career goals, but most participants talked about career progression in general terms. Several participants said that they wanted to progress in their career but were not sure what opportunities for promotion existed within addiction treatment. Many participants saw a career in management as the 'next step', but there were mixed views about the merit of working in management. Some participants said that being a manager would mean that they could have more of an impact on how addiction services were delivered. Others saw management jobs as involving less contact with service users, more administrative work, and as being highly stressful.

> *"Would I want to be a team leader? No. Not in this, not in this environment, because we've cut out a whole tier of line management…So two locality leads have gone, so then we've got a deputy manager and then team leaders. In the hub. So, team leader roles have taken on the locality leader roles and absorbed it into their jobs and then have to… Do everything. And I don't think there'd be much job satisfaction in that."*
>
> *Rachel: Non-specialist project worker*

Participants were often motivated to attend training that was directly related to their work with service users. This related to the importance identified in previous data about the content of training being relevant to participants' work. Small but direct interventions such as acupuncture or

mindfulness were often popular because they provided participants with a skill that they could directly apply to their service users.

> *"I'm not sure if I'm honest I think I'd probably, if anything like to do something um, not as intense maybe like mindfulness or something like that that I could do or deliver to my clients."*
>
> *Audrey: Groupworker*

Several participants linked their motivation for education and training with the needs of individual service users on their caseload. In these cases, participants' motivation for training was driven by a desire to work more effectively with those specific service users. Many participants were motivated to attend dual diagnosis training having worked with service users with mental health diagnoses.

Another common motivation for education and training was personal development. Some participants said that learning about psychological treatments and theories contributed to their own personal awareness and personal development. For some, this was related to their previous experiences as an addiction treatment service user. Other participants' personal development goals were more related to skills development.

> *"Because I think why not because if it's there to be offered to you then obviously why not improve yourself and take it?"*
>
> *Lucy: Non-specialist project worker*

Many participants were motivated towards training in order to increase their confidence in delivering therapeutic interventions. Increased confidence was also valued in discussing service users with other professionals. Some participants said that an addiction-specific qualification would make their views carry more weight with colleagues and other professionals, and that this was important to them.

The provision of mandatory or compliance training provided by addiction treatment providers is detailed above in section 10.1.2.4. That these courses were mandatory provided participants with a strong motivation for completing them. This indicates that SMW motivations are not static and are regularly influenced by external factors, in this case organisational and regulatory pressures.

Many participants were interested in studying addiction because they found it interesting. This interest seemed to grow as participants learned more about addiction. Some participants said that they enjoyed learning regardless of the subject, and that learning was more enjoyable if the subject was challenging.

11.2.3 Qualitative interview findings: Key stakeholder participants' perspectives on motivation to attend training

The KSH interviews (n=14) provide some perspectives on the motivations of SMW participants. These data cover training courses that SMW did and did not seem to be motivated to attend, as well as factors KSH consider important in improving SMW motivation.

11.2.3.1 Training courses that staff are motivated to attend

KSH said that SMW were often highly motivated to attend MI. Other subjects that KSH said were popular included benzodiazepines, CBT, compassion fatigue, 'grey areas', harm reduction and needle exchange, new drugs, leadership training, new drugs, performance enhancing drugs, research updates, safer injecting, solution-focused brief therapies and spice. The most common reason cited by KSH for the popularity of these training subjects was in the subject's practical application and relevance to work. This emphasises again the importance of training being relevant to the work of SMW.

> *"I think it's people, especially CBT, they like the idea of being able to deliver it and the sort of counselling side of things as well. I think some of the training like alcohol, opiates and more specific it's more sort of knowledge based. So there's CBT and things you actually get to practice interventions it's more sort of role plays you get more involved in it rather than just sitting and just taking in information."*
>
> *Jasmine: Training (KSH)*

Other KSH suggested that motivating factors for SMW might include courses that had certification, course reputation, exclusivity and positively framed or creatively titled courses.

11.2.3.2 Training courses that staff are not motivated to attend

KSH acknowledged that there were low levels of motivation among SMW for completing mandatory training courses. Some said that this low motivation was part of the reason the training had become mandatory and that if SMW had been motivated to complete those courses, the organisations would not have had to make it compulsory. Some KSH also noted that despite SMW low motivation for mandatory training, the organisations had a high motivation for completion of those regulatory courses; and that these differences in motivation could cause friction.

KSH said that other reasons for low motivation among SMW were based on expectations of low quality training where SMW did not learn anything. Some KSH applied this latter factor to the experience of completing an NVQ in Health and Social Care. These perceptions indicate that low quality training can deter participants from attending future training courses.

> *"I am an NVQ assessor I am a qualified NVQ assessor and I have assessed people through NVQs, my personal view is that you can get through an NVQ without learning anything."*
>
> *Denise: Training (KSH)*

A final demotivating factor identified by KSH, was the fear that SMW might have of having to implement learning following training. One KSH said that some staff were scared of having to implement safeguarding protocols in their workplace, and that this fear deterred them from completing safeguarding training.

11.2.4 Summary

The results relating to Objective 7 are summarised in Table 49. SMW participants were motivated to attend training to improve their career although many were confused about career options in addiction treatment. They were also motivated by personal development and confidence building. Many found the subject of addiction interesting and this motivated them to learn. KSH said SMW were motivated for training on therapeutic interventions and other treatment related to service users. KSH noted that SMW were put off by training that was dull, poor quality and where they did not learn anything. SMW were also seen as being cautious about training that made them responsible for regulatory compliance such as safeguarding. High quality training with management backing and a variety of learning styles was seen to improve SMW motivation.

Table 49: Summary of results relating to Objective 7

To identify what motivates substance misuse workers to access addiction education and training

Survey data	SMW Interview data	KSH interview data
58% of participants intended to stay in their current position	Participants were motivated by their career, but were unsure about how to progress within addiction treatment settings	KSH saw that SMW were motivated to attend training on Motivational Interviewing, Benzodiazepines, Cognitive Behavioural Therapy and Compassion Fatigue
66% of participants were motivated to study in the next year	Many were motivated by a wish to improve treatment delivery and to help service users	KSH thought that popular courses were those with a practical application and relevance to work
SMW participants were motivated towards predominantly therapeutic training subjects, with low levels of motivation for training in administrative tasks	Participants were also motivated by forms of personal development as well as being interested in the subject of addiction and addiction related issues	KSH knew that SMW had low motivation to attend regulatory training, but stated that there was a high organisational motivation for those training courses to be completed
		KSH said that there was a low motivation for low quality training, and that SMW previous experiences of low quality training could deter future motivation

SMW = Substance misuse workers; KSH = Key Stakeholders

11.3 Summary

There was a wide range of training for SMW. There seemed to be standardised training provision for new SMW, but little training for more experienced SMW, with advanced training more difficult to provide and needed by fewer SMW. Participants were interested in training on therapeutic interventions. They needed, but rarely wanted to complete, administrative training. Mandatory training dominates online learning. This largely comprised regulation-driven courses that were unpopular with SMW and was generally used as a skills audit rather than as training.

The importance of therapeutic relationship skills was raised by many SMW and KSH, but those skills were rarely trained. Many participants were unsure about whether therapeutic relationship skills could be trained or whether they were based on personal characteristics.

A lack of time was the largest barrier to attending training, an issue that became ever more acute as funding and staff levels reduced. Other barriers included locations, recommissioning and organisational cultures. Online training partially addressed barriers of time and location.

Most KSH were in favour of a single mandatory qualification for SMW but some doubted its importance, suggesting that the personal characteristics of SMW were more important than skills and knowledge developed through training. There seemed to be little financial or political support for the development of a single mandatory qualification, some KSH raised issues of stigma against addiction as an explanation for a lack of political support.

12 Results: Use of research, evidence-based practice, online resources and technology

This chapter will summarise how substance misuse worker (SMW) participants and key stakeholder (KSH) participants accessed information on research or evidence-based practice (EBP) related to addiction treatment. It also describes how that information becomes embedded into treatment systems and daily practice. It then describes the online resources that SMW and KSH accessed and used, as well their access, and use of, internet technology.

12.1 Objective 8: To identify how substance misuse workers access and use information on research and evidence-based practice

There were no quantitative data relating to this objective, the qualitative data will describe how SMW participants accessed and used information on research and evidence-based practice.

12.1.1 Qualitative interview findings: Substance misuse worker participants' use of research and evidence-based practice

The experiences of SMW and KSH in accessing and using research and EBP are described here, with SMW perspectives presented first.

12.1.1.1 Access to research and evidence-based practice

Many SMW interview participants (n=31) felt unable to interpret the large amounts of, often contradictory, information relating to research and EBP that was available to them. One participant commented that there was so much information available on the internet that you could prove anything to be true and emphasised the need for quality assessment of online information, a process that was largely absent in the SMW interview data.

> *"So like, a lot of young people at the minute are saying about cannabis oil and cancer and it being. Well you know we've seen the documentaries that have been done and we've …. But*

unless you dig on the internet, and my thing is if we wanted to prove that Elvis was alive you could find it on the internet, you could find that information."

Becky: Young persons' outreach worker

Compounding these issues, many participants said they did not have time to find and interpret information on research and EBP. Some participants said that finding information online could be a difficult, and time-consuming task. Rather than having no time at all, participants said that they might have time to search for information on research and EBP if it were a quick task, but not when it seemed to be a long and confusing process.

"Sometimes it's a bit of a mission. Because it's, you know, obviously it's about putting in the right words for the search engine isn't it. Sometimes it can… it took me quite a while to sort of find some decent stuff on tranquilisers for example."

Rowena: Team leader

The complex nature of search results could also deter participants from looking for information on research and EBP. Several participants noted that they found information on research and EBP difficult to read, especially scientific papers or research reports. Online paywalls (where information is restricted unless the user pays for access) further prevented participants from accessing information on research and EBP, one participant said they searched for information using Google but that they were often unable to access research publications without paying. Some participants thought that improved web design might improve access to research and EBP and were critical in particular of university websites saying that they were difficult to navigate.

"I think, by and large, universities could be more open with their researches (sic) that they do. …Because all research is held by the university and then you have to apply for access to that research. If the research for example if your own research was online or the universities had an online vault where all their research was, and you could go and look through research online, I mean if you, pay a pound or something, I dunno, they could um you know it would be a lot better."

Laurence: Counsellor

Two participants said that they would value the ability to search an addictions website by symptom or by service user need, a feature than they had not found on current online resources. Several participants that they would find websites useful if they had brief summaries of research. Some said

that having one website where large amounts of information was held would be useful, and that this would prevent them having to go to numerous websites in order to gather information. These preferences were not based on current experiences but reflected characteristics of online resources that participants thought would be useful. One participant acknowledged that online resources that presented research and EBP according to service users' presenting issues would be of very high value but would also be very complex to design.

> *"Like if you could go in and say 'I have a white male of this age who's been using this drugs, this is his history', that would be the ideal and literally a whole bunch of tick boxes and that would say bam, have a look at all this. But imagine the complexities of that. You'd end up with a page of 'OK if it's historic trauma it's all this', 'If it's drug use it's this, which then could link into this, but might not because it might link into this'. It would be tricky I think. It would be a tremendous feat. But I think it would be tricky."*
>
> *Nick: Non-specialist project worker*

12.1.1.2 Searching for evidence-based practice and research

The two main ways that participants searched for information on research and EBP were by searching the internet (using Google), and by talking to peers although these methods were not mutually exclusive. Some participants said that they learned about research and EBP from their peers, and that these peers would often direct them to online resources. Similarly, some participants would find information online and then share it with colleagues. The two sources of information (peer and internet) were often used in parallel. Online resources used by participants are described in detail in section 12.3, and so just the results that relate to research and EBP are summarised here.

Many participants said that they would search organisational intranets for information on research and EBP. These intranets tended to contain information on training, policies and procedures and HR processes (annual leave request forms etc.) along with worksheets for use in treatment delivery. Most participants would then use Google to search for information on research and evidence-based practice. Online resources that were popular among SMW participants included the British Association of Art Therapists (BAAT), Cochrane, Deepdive, DS Daily, Facebook, ITEP online, NHS, Ted Talks and Wikipedia. A few participants said that they read research articles, but these participants tended to be those with previous academic experience. Many participants said they valued online treatment manuals that included workbooks, worksheets, group exercises and session plans. Examples of these kinds of resources included ITEP manuals as well as resources produced by Texas

Christian University (who provide free online resources and guides to interventions for us in addiction treatment (TCU Institute of Behavioural Research, 2018)). Participants valued the ease with which these resources could be used in treatment, but also noted that they themselves learned about research when delivering the content.

> *"PARTICIPANT: The Texas Christian University. Oh, they've got so much resource, like literally women's groups eight session women's groups. Yes, some of it needed to be anglicised, but again, just good seemingly quite sound psychological CBT work.*
>
> *INTERVIEWER: Again, how did you first come across Texas Christian University?*
>
> *PARTICIPANT: A bit of a steer from the ITEP, but not really anyone saying to me 'my goodness girl, go to this website it's packed with resources' rather 'yeah you know it's Texas Christian University have done this stuff'."*
>
> *Nina: Non-specialist project worker*

Most peer learning related to research and evidence-based practice seemed to happen in an unplanned and informal way. Participants said that they would approach colleagues for information on subjects where those colleagues were known to have expert knowledge. Some of these specialists were formally identified (such as the safeguarding lead within a service) whereas others known by reputation. Some participants used formal structures for sharing information such as team meetings or case reviews. However, most peer learning reported by participants seemed to occur in informal settings. Most participants did not question whether information from peers, experts or online resources was accurate or of high quality. Just one participant said they questioned the reliability of information provided by colleagues.

> *"I just would say. I just… you know if my boss told me that CBT was evidence-based and the way to go I'd just go 'OK'. (laughs) rather than look it up myself. I kind of just take it for granted that people. That the stuff that's cascaded down is what it says it is. (Laughs) it could be a load of pants… No do you know what I mean like it is. I kind of take it for granted that these people know what they're doing."*
>
> *Jenny: Non-specialist project worker*

12.1.1.3 Content and format

Participants said that they would prefer to use high-profile websites where they could browse through large amounts information, and where the quality of content could be assured, but there were no common resources identified by participants that met this need. Organisational intranets were often cited as good examples of large and trusted resources. Most participants said that the format of research and EBP related resources was important. Some participants suggested that information on research and EBP should be produced in a range of different ways to accommodate different learning styles, so that rather than one optimal way of formatting research and EBP resources, there were varied ways to do so depending on the preferences of individual SMW. One participant, however, was fatalistic about the possibilities of reformatting research and EBP, suggesting that there were no good formats because the task was impossible.

> *"INTERVIEWER: Is there any way that you think it could be easier for you to access research findings and evidence base?*
>
> *PARTICIPANT: There isn't any. If there was it would be available….If there was a good tool, everyone would be using it, but there isn't… if it had been invented someone would have thought about it. I mean the problem is, the information is unwieldy, it tries to cover every base possible and it tries to be all things to all people it's impossible. If there was a good tool, I'd use it, but there isn't."*
>
> *Donald – Psychiatrist*

12.1.1.4 Relevance to work

As with the characteristics of enjoyable training, participants considered information on research and EBP to be useful when they related to their work and could be directly used in addiction treatment. Many participants said they wanted to know what to 'do', and were not always interested in the history or context of the evidence on which treatments were based.

> *"Yeah, if there's a practical 'do this' you know, if. As much as I'm intrigued by the where's, what works. I would then want to be given sort of like, 'well these are the tips of what you could then do as a practitioner'. Um as opposed to 'this is what we know'."*
>
> *Becky: Young persons' outreach worker*

Participants valued practical resources such as worksheets, groupwork sessions and treatment plans. These resources were especially useful when they could be used flexibly. The ability to use resources flexibly was not determined by the guidance attached to those resources, rather it was determined by how easy participants found those resources to alter. Participants placed a high value on session plans that could be adapted to meet service users' needs.

> *"I print some stuff off, I've got quite a lot of stuff that I print off. The tools are already there, so I'm just… it's sectioned into weeks. I don't, we don't deliver it parrot fashion, we try and keep it, working around the people we've got in the room obviously. Because that would be just awful, so we mess around with it a little bit and depending on who we've got on the groups."*
>
> *Rachel: Non-specialist project worker*

Participants also valued resources that could be cited when liaising with external agencies or with managers. Many participants said that resources that carried status, such as the Orange Clinical Guidelines (UK Department of Health guidelines on the clinical management of drug misuse and dependence) or resources from the Royal College of General Practitioners (RCGP), were useful because of the weight they carried when in discussions with staff in external agencies.

12.1.1.5 Relevance and use of clinical guidelines

Participants were asked about their use of clinical guidelines. The most recent Orange Clinical Guidelines were published in July 2017 (Department of Health (England) and the devolved administrations, 2017) during interview data collection. Interviews taking place after this time might have elicited a different response from those interviewed beforehand and may refer to a previous version of those guidelines. Few participants said that they regularly referred to the Orange Clinical Guidelines. Those that did, talked about using them reactively to answer service user-focused questions, or proactively to prove a clinical point to an external agency.

> *"INTERVIEWER: In what kind of context would you look at [the Orange Clinical Guidelines].*
>
> *PARTICIPANT: Um. The doctor needed some help to explain to a client that was pregnant about the dangers of reducing buprenorphine while she was pregnant. So, we got the orange booklet out and showed her that part of it. And then we use it when the pharmacist calls and says, 'this prescription was signed over a month ago' and we can say, we'll fax you this piece of paper that will show that you can."*
>
> *Rebecca: Non-specialist project worker*

Participants who did not use the Orange Clinical Guidelines suggested a range of reasons for not doing so. Some felt they would prefer to answer questions by using a general internet search, by asking a colleague or by asking their team manager. Several said that the Orange Clinical Guidelines were not relevant to their role because they did not do clinical work; the assumption being that they were relevant only to prescribing or medical practitioners. This lends weight to KSH data about how the title of training (or in this case guidelines) can influence how it is perceived among SMW.

> *"INTERVIEWER: So, do you use any clinical guidelines like the orange book or, um, like twelve step manuals or CQC guidance or any of those things?*
>
> *PARTICIPANT: No, we're not CQC registered here, we don't do any clinical work here what-so-ever. So, we don't use those, no."*
>
> *Vanessa: Supported housing worker*

Other clinical guidelines and treatment manuals referred to in name by participants included the British National Formulary (BNF), International Treatment Effectiveness Protocol (ITEP) manuals, National Institute for Health and Care Excellence (NICE) guidelines, and an in-house groupwork manual. These were all minimally used by participants and were prone to being abridged and amended before use with service users.

12.1.2 Qualitative interview findings: Key stakeholder participants' use of research and evidence-based practice

KSH (n=14) used a range of online resources to find information on research and EBP including academic databases, the Advisory Council on the Misuse of Drugs (ACMD), Drug and Alcohol Findings (DAF), Drink and Drug News, DS Daily, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), New Scientist, NICE guidelines, Orange Clinical Guidelines, RCGP website, and general internet searches. These seemed to be accessed according to the current needs of those KSH.

> *"INTERVIEWER: Do you use any other things like the Orange Guidelines?*
>
> *PARTICIPANT: Yeah, the Orange Clinical Book Guidelines, yeah, what else? ……I mean I guess for me personally, honestly, it's ad-hoc as opposed to something I do on a kind of regular scheduled in basis ….*
>
> *INTERVIEWER: Ad hoc as in driven by need again?*

PARTICIPANT: Driven by need usually yeah. Um, yeah or … yeah so things might have been presented to us and like… you know briefing emails or something to … read this."

Maya: Service manager (KSH)

Some KSH said that the Orange Clinical Guidelines were too vague to be of practical use, and a few KSH were unsure whether anyone in addiction treatment services would use them. The format was important, one KSH said that they felt unable to use the new Orange Clinical Guidelines because they were online rather than published on paper.

"Yes well I would if they'd … publish them. 'oh we're not publishing them you've got to read them all online', well I've told you what I think of looking at a screen all day haven't I. All 600 pages have got to go and get printed now. And so I found that really unhelpful. I always have two or three books like that next to my desk it might be the Orange Guidelines. And something that I still use today is the substance misuse review for young people that they did all those years ago. Do you remember that thick book, I still have that. The fact that the new Orange Guidelines are not available to me in a hard copy means that they're not there. And I haven't really looked at them… because I need a book."

Sofia: Senior management (KSH)

KSH saw the NICE guidelines as a good source of information for developing training and treatment delivery. There was little detail from KSH about how NICE guidelines informed training or practice despite confidence that they did so. One KSH commented that the NICE guidelines were also too vague to be of use. As with the Orange Clinical Guidelines, the UK Drug Policy 2017 (HM Government, 2017) was released during the interview data collection. Many KSH were dismissive of its impact, one said that it was lacking in substance, one KSH noted that the last major government investment in addiction treatment came as a result of HIV and heroin epidemics of the 1980s and they felt that it would take this kind of large societal issue to change policy and to drive investment in the sector. This view adds some context to data suggesting that political influences act as a barrier to investment in addiction treatment and professionalisation of the substance misuse workforce.

In contrast to SMW, most KSH said they had used Drug and Alcohol Finding's website (Ashton and Davies, 2018); with many commenting that it was a popular resource among KSH despite misgivings over its design.

"PARTICIPANT: It [Drug and Alcohol Findings website] is just really accessible, I just find it really easy to read, and it alerts me very easily, so I don't have to do anything, it's just 'ding'. Um, I did tell them this, the whole design is dreadful."

Sarah: Senior management (KSH)

Other, less commonly used online resources included academic databases such as PubMed, DS Daily, Drink and Drug News, European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) newsletter, New Scientist and the RCGP Website. Google was regularly used by KSH to search for information on research and EBP.

12.1.2.1 Barriers and facilitators to key stakeholders accessing research and evidence-based practice

KSH accessed information on research and EBP in similar ways to SMW, largely by using Google and by talking to peers. Many organisations had subject matter experts within their senior management teams and KSH were often confident that they knew who who to approach for advice on a range of subjects. Informal peer learning for KSH tended to rely on knowing a lot of specialists in the sector and calling on them when queries arose.

"I ring up my consultant psychiatrist or three of them or one of them. And go, 'oh [name of psychiatrist], I'm interested, you know I saw' you know so I'll talk to him, yeah, they're lovely they're really really good. I needed some information about BBVs the other day and we've got a specialist nurse, so I just go 'oh I've got…' I'm lucky. 'Oh, can you explain how this works' yeah."

Sofia: Senior management (KSH)

Some KSH talked about having established formal partnerships with universities and said that those relationships had helped them to access, and use, information on research and EBP.

"We're kind of trying to introduce some neuroscience knowledge about drugs in … so we've made a … online unit [name of training module]. And I collaborated with the professor of neuroscience from [name of town] university who kind of helped me with it and made sure that everything I'd put in was actually fact… Which was helpful."

Ben: Training (KSH)

As with SMW, the KSH participants often struggled to understand the content of research. Many KSH said they were uncertain about how to match research outputs to the practical delivery of treatment, saying that it was difficult to translate academic output to something that was relevant for SMW. Accordingly, many KSH found it hard to identify research that was relevant to them and

their needs. KSH reported few methods of assessing the quality of research, particularly when research studies produced conflicting findings.

> *"A general search engine will fire a load of research back at you, but you've actually got to go into it to see how relevant, how good the research is, how trustworthy the research is, because there's a lot out there. Um, and how up to date it is. I've found myself reading papers and thinking 'this is fantastic, this is the most interesting…' and I just think, 'oh but it is from 1987' you know (laughs)."*
>
> *Ben: Training (KSH)*

Some KSH talked about the diminishing numbers of independent organisations that work to advocate for treatment, policy and research in addiction treatment. This lack of independent organisations was seen as a barrier to accessing information on research and EBP and was again aligned by KSH to the reduced funding available within addiction treatment.

> *"When you look at what's gone in the field, it's incredible. DrugScope has gone, Alcohol Concern has gone, Lifeline has gone, and others that I can't remember have gone…if you go back further ISDD and SCODA have gone and the, the availability of a voice for the field at that national level is seriously seriously diminished."*
>
> *Harry: Dissemination project (KSH)*

12.1.2.2 Influence of policy and regulations

The Care Quality Commission (CQC) was the most common regulatory influence cited by KSH, but their influence was not always seen to be positive. Most KSH agreed that the CQC drove compliance but were less certain about the CQC's ability to improve the quality of addiction treatment provision. One KSH said that, because the CQC audited completion of mandatory training, this could motivate an organisation to reduce the scope of their mandatory training.

> *"I think the difference is I think that a lot of the e-learning is mandatory and because the CQC, people look at compliance levels for mandatory training. It does make a difference, because they'll breach us, they have breached us. So you know, 'you say this is mandatory and you've got 40% of your workforce that have completed it'. Now you could say, 'none of it's mandatory' and then we wouldn't get breached… Do you see what I mean?"*
>
> *Sarah: Senior management (KSH)*

Some KSH resented the time spent responding to the CQC's audits, saying that these responses took time away from work on service improvement initiatives. Some KSH said that the CQC was a disruptive influence, saying that it drove a culture of fear.

> *"I think, it's a complex relationship with CQC I think that they. I don't think that the way that they work with organisations drives up quality at all. I think it's counter-productive, I think they create cultures of fear and I think that they disengage staff because people feel like they've got to do something else and they're highly critical of services."*
>
> *Sarah: Senior management (KSH)*

There were positive comments from KSH who said that the CQC's inspections had provided an impetus for staff training. Some suggested that the CQC as an organisation had the potential to insist on a sector-wide qualification, and that in not doing so an opportunity had been missed. One participant said that the CQC drove good medical practice which in turn prevented deaths from unsafe detoxification and clinical malpractice. Many agreed that the CQC improved safety for service users.

12.1.3 Summary

The results relating to Objective 8 are summarised in Table 50. SMW participants struggled to access, interpret and use information on research and EBP. Although some had difficulty finding information, most said that it was the large amounts of information available online that prevented them from understanding the implications of research findings. Most SMW participants used Google to search for information. Some suggested that a single website where they could search for information by symptom would be useful, but others thought that the complexity of addiction treatment and research prevented such a resource from being designed.

Resources that participants considered useful were those that related directly to their work with service users, that had delivery resources (such as groupwork exercises or treatment plans) and that could be adapted to individual service users' needs. Few SMW participants used clinical guidelines or manuals. Several SMW dismissed the Orange Clinical Guidelines as irrelevant, perceiving them to be for clinical (or prescribing) staff only.

Most participants learned about research and EBP from their colleagues. Most knew colleagues they would approach with queries on particular subjects. These were champions, subject matter experts or informal contacts who were perceived to be knowledgeable. KSH too used peer contacts to learn

about research and EBP, although their contacts were more formalised and were often part of organisational management structures. KSH were also daunted by searching for research but seemed to be aware of useful resources such as Drug and Alcohol Findings' website, as well as having knowledgeable colleagues to consult. They reported using clinical guidelines and treatment manuals to inform training and policy.

Table 50: Summary of results relating to Objective 8

To identify how substance misuse workers access and use information on research and evidence-based practice

Survey data	SMW Interview data	KSH interview data
No survey data were used to meet this objective	Many SMW participants found information about research and EBP too complex to understand, and few had the time available to search for it Many SMW said that research outputs do not match service users' needs SMW participants search for research and EBP by using Google, or by asking peers. Few reported assessing the quality of information Useful resources were those with worksheets, treatment plans and other practical resources that could be adapted and used in treatment Most forms of research and EBP were adapted and changed in delivery. Resources that could be easily changed were highly valued Some SMW found clinical guidelines useful for liaising with external agencies, but few referred to them and some did not think that they were relevant	KSH were more likely that SMW to use clinical guidelines to inform policy and training. Popular resources were The Orange Clinical Guidelines, NICE and Drug and Alcohol Findings Most research and EBP resources were used informally and their use was driven by need. Most used Google to find information Many KSH consulted expert peers, often within their organisation, some had links with universities, and found these links useful KSH also often struggled to understand the content of research and EBP Some KSH noted that there were fewer third party organisations that used to interpret research findings

SMW = Substance misuse workers; KSH = Key Stakeholders: EBP = Evidence-based practice

12.2 Objective 9: To identify the technologies used by the substance misuse workforce to access the internet

12.2.1 Quantitative survey results

Survey participants (n=200) said they used the internet for a median of four hours per day (two hours at work and two hours at home). As discussed in section 11.1.3 above, participants experienced a range of barriers to using technology with many having to rely on slow and unreliable computers to access online resources. Fewer than half of participants had their own computer at work, and a quarter shared their desk and computer with other SMW. Access to internet technology differed between latent class subgroups with Recovery Keyworkers more likely to have their own computer than members of the other two latent classes (X^2 (2, n=200) = 12.595, p=.002).

At work, most survey (n=200) participants used a desktop computer to access the internet (76%), although under half (47%) had access to a computer designated for their sole use (Figure 12). A quarter (25%) of participants shared their desk or computer with other staff (hotdesking). At work and at home, over two-thirds (67%) used a Smartphone to access the internet; almost as many as used a desktop computer. Over half of participants used a laptop (53%) and 41% percent used a tablet.

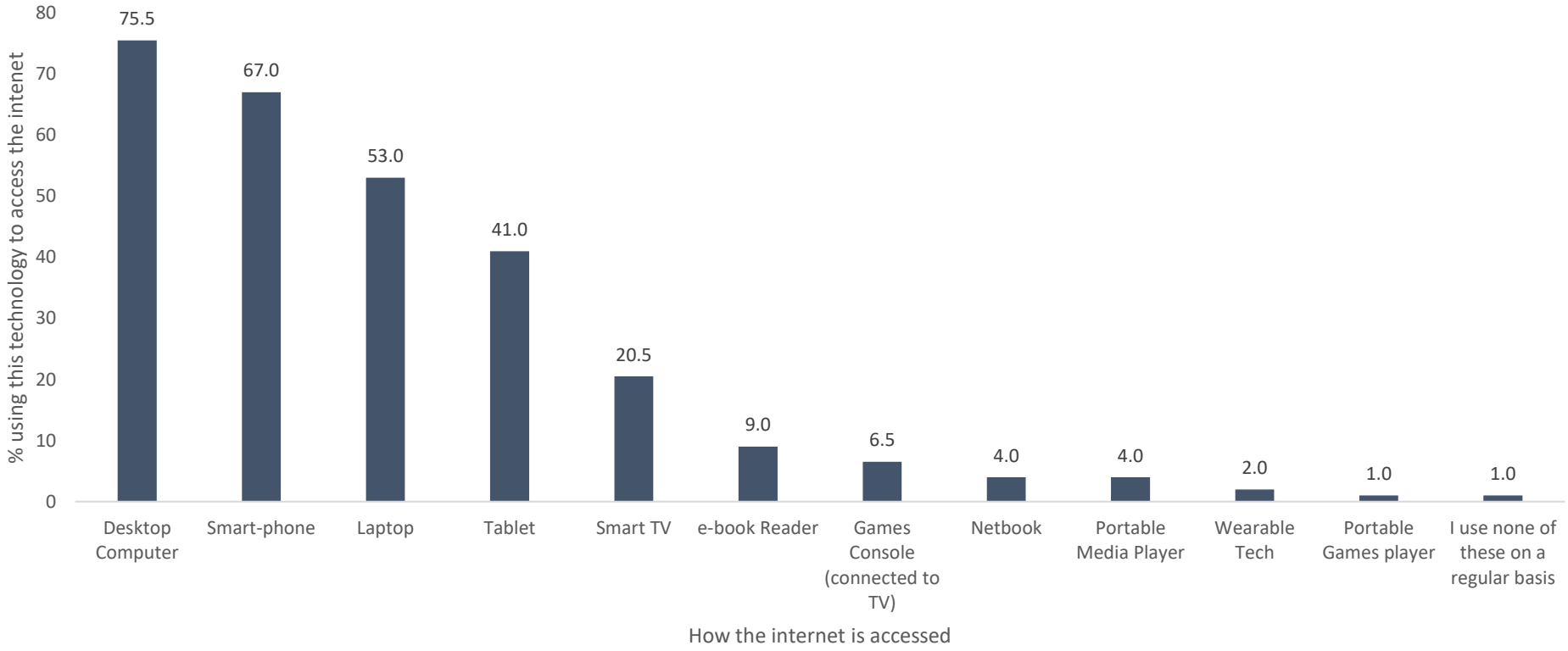

Figure 12: Technology used to access the internet. Multiple selections were possible. (n=200)

12.2.2 Qualitative interview findings: Substance misuse worker participants' use of online technology

The SMW qualitative interview results (n=31) describe the technologies, specific websites and types of online resources that participants used. They also cover participants experiences of online learning.

12.2.2.1 Use of internet technology

Outside of work, nearly all participants used a Smartphone to access the internet saying that they were easy to use, because they were instant and because they had 'everything on them'. Most participants described accessing the internet in a variety of ways that changed depending on the context. One prison worker said that they did not use their Smartphone at work because it was not allowed in the prison. Several participants talked about using their Smartphone when delivering outreach services, or for checking emails when travelling between services. Participants said that Smartphones provided by their work were often low quality and had poor functionality, many choosing to use their personal Smartphones instead. A few participants that their access to the internet at work was via Wi-Fi, a dongle, or 4G signal and that this could make access to online resources unreliable.

Whilst at work, participants used desktop computers, laptops and tablets to access the internet. Some participants used 'thin clients' (computers that link into a central organisational server before accessing the internet). Many participants said they 'hot-desked', meaning that they shared computers and workspace with other members of their team. Some participants said that when their office was busy it was difficult to find a computer to use. In some services organisations had encouraged SMW to use tablets that could be taken into key-working or used at a desk if necessary. A few participants said that their service had started using tablets to enter data into online case management systems during service user assessments. There was some ambivalence about this practice. Some thought that it would save time, but others felt that it would detract from focusing on the service user.

> *"Yeah yeah, And I know that I can, you know we were told that we could do assessments, and do it direct on to the tablet. Um. I can't type on to a tablet and talk to somebody at the same time."*
>
> *Vanessa: Supported housing worker*

The main restrictions on internet access described by SMW participants were related to poor Wi-Fi and internet signals. Some participants said that their office had slow and intermittent internet signals, and that this could interrupt their work. Participants working in rural areas seemed to be more prone to these kinds of problems than those in urban settings. Several participants said that their online case management system could be very slow at particular times of the week; with Friday afternoons cited as a common problem. Some participants' computers did not have sound, some reported that the sound on their computer was too quiet to use, several added that they were not allowed to use headphones in their office, because they needed to hear the door, telephone and to be aware of service user interactions happening in the service.

> *"INTERVIEWER: There's no sound on any of them?*
>
> *PARTICIPANT: Not that I know of. I haven't tried. Although here, I needed to do training and I needed earphones because I couldn't turn up the volume.*
>
> *INTERVIEWER: Oh, OK but you were able to plug in the earphones and,*
>
> *PARTICIPANT: No no I just got really really close to the computer and guessed what they were saying."*
>
> *Rebecca: Non-specialist project worker*

Social factors also prevented some participants from using the internet. Some said they felt judged by colleagues or managers when they were online for too long. These participants said they needed to be available for work or to support their colleagues and service users and that using the internet took them away from this.

12.2.3 Summary

The results relating to Objective 9 are summarised in Table 51. Participants used laptops, desktop computers and Smartphones to access online resources. Participants used the internet for a median of four hours every day, two hours at work and two hours at home. At work, participants used, and often shared, a range of unreliable technology to access the internet. A quarter of participants did not have their own desk, and just under half had their own work computer. Online connections used by participants were characterised as slow and unreliable, with some restrictions placed on websites and content. Many participants used computers with no sound. Some SMW participants had started

to use tablets in assessments and key-working sessions but feelings about the efficacy and appropriateness of this use were mixed.

Table 51: Summary of results relating to Objective 9

To identify the technologies used by the substance misuse workforce to access the internet

Survey data	SMW Interview data	KSH interview data
SMW participants used the internet for two hours per day at work	Most SMW participants used Smartphones, many who worked in outreach settings accessed the internet using a Smartphone	No KSH data were used to meet this objective
Under 50% of participants had their own work computer	Participants said that it could be difficult to find a desk and that they often shared their desk and computer with colleagues	
25% of participants shared their desk and computer with colleagues	Some participants had started using tablets for key-working and in assessments, but many SMW were uncertain about whether this was effective or whether it detracted from delivering therapeutic interactions	
	Many SMW were frustrated by poor Wi-Fi and internet signals and slow computers, many of which could not play sound	

SMW = Substance misuse workers; KSH = Key Stakeholders

12.3 Objective 10: To identify the types of internet resources commonly used by the substance misuse workforce

The quantitative data relating to this objective describe the popular addiction-specific websites used by participants. The qualitative data describe how SMW participants used the internet as well as their experiences of online learning.

12.3.1 Quantitative survey results

12.3.1.1 Use of addiction related websites

The most popular addiction-specific online website was participants' organisational intranets mentioned by 32% of participants (Table 52). Drink and Drug News was used by just under a quarter (24%) of participants, Frank by 12%, Public Health England (PHE) or National Treatment Agency (NTA) by 11.5% and the NHS by 9%. Drug and Alcohol Findings was used by 5% of participants. Beyond this there was a long list of diverse addiction-related websites that were used by fewer than 5 (2.5%) participants (Table 53).

Table 52: Commonly used addiction related websites, multiple websites were described by each participant (n=158)

Website	***n* (%)**
Organisation intranet	64 (40.5)
Drink and Drug News	28 (17.7)
Frank	24 (15.2)
NTA / PHE*	23 (14.6)
NHS*	18 (11.4)
Online case management system	11 (7.0)
Drinkaware	11 (7.0)
NICE*	11 (7.0)
Drug and Alcohol Findings	10 (6.3)
DrugScope	9 (5.7)
Erowid	8 (5.1)
N/A none	7 (4.4)

**Acronyms are reported as written by survey participants*

Table 53: Websites named by fewer than five participants (n=158)

AA*	CQC*	FEAD*	Lancs User Forum - Facebook	Patient.co.uk	SSA*
Addiction today	Cric Info	Frontier medical	LinkedIn	Pavillions.org.uk	Surrey drug and
ADDICTIONS	DAAT*	exchange supplies	Liverpool John Moores public	Powerpoints	alcohol.com
Adfam	DAAT Postcode checker	Get Self Help	health institute	Psychiatric times	Texas Christian Union [sic]
Alanon	Daily Dose	Global Drug survey	Local drug and alcohol policies	Psychological tools	The Fix
Alcohol Concern	DAT Code*	Google	and procedures	Psychology today	The Guardian
Alcohol learning centre	DBR*	Google group work ideas	Loop	RCGP**	therapistaid
Alcoholrehab.com	Deirdre Boyd Emailed list of	Google Scholar	LUF*	RCN	Tommy Rosen Recover 2.0
ARCC*	news	GOV.com*	Medicines.org	Recovery	Turning point
BACP*	Div. related websites	GP websites	Medline	Recovery groups	Twitter
BBC news health section	DoH Data reports*	Guardian	methadone alliance	Recovery Resources	UK Drug watch
online	Domestic abuse - idvas*	Harm reduction works	MI Forum*	Recovery sites	Urban 24
bma.org.uk	Drug and alcohol news	Headspace	Mind	release	Veterans NHS Wales
BNF*	Drug Info	Healthwatch	Moodjuice	re-solv	WDP*
BPS*	Drug misuse gov	Hit	Nacro*	Royal College of	websitestranet
Breaking free online	Drug science	Housing	NDTMS*	psychiatrists	Wikipedia
British Liver Trust	Drugfree world	Ideas for groupwork	Netdoctor	rsm.ac.uk	William White
catalystsupport.org.uk	Druglink	websites	NHS Jobs*	S2S*	YJB*
CCI.health.wa.gov.au	Drugs and me	Illy	NHS spirits guide*	Safeguarding	YouTube
Centre for optimal living	drugs.net	Injectingadvice.org	NHSBSA*	Safer Injecting overdose	
Choice and medication	Drugwise	Inrecovery	NIDA*	prevention sites	
CJSM*	DS Daily	Inspire Social media	NMC*	Sam	
CNWL*	Electronic medicines	Intervene	NOFAS*	Self help	
Cognitive behaviour	compendium	Justice.gov.uk	Nursing times	Skill station	
tools	EMC*	KCL*	Orange book	SMART*	
Cognitive therapy	Facebook Mutual aid support	KFNX*	Other drug agencies for	SMMGP*	
approaches	groups FDAP*	KFX*	referral	Social Services	

**Acronyms are reported as written by survey participants*

12.3.2 Qualitative interview findings: Substance misuse workers use of internet resources

The SMW interview findings (n=31) describe participants use of the internet as well as their experiences of online learning. The KSH interviews add some detail and describe their perceptions of online learning.

12.3.2.1 What the internet is used for

The two dominant themes identified through data analysis, both concerned searching for information related to service users' needs. First, SMW participants said they used the internet to find information relating to specific service users' needs, such as information on drugs, drug interactions, medications and mental health disorders. Second, participants said they used the internet to find contact details of external treatment agencies such as in-patient detoxification or counselling services. Participants also talked more generally about 'looking things up' using Google. Few participants reported using the internet in a structured way, rather most would search using Google, and select websites from the first results page. Many participants said that this meant they regularly learned new information from a range of different resources, albeit filtered by Google.

> *"INTERVIEWER: And are there any regular websites that you go back to like are there any trusted resources?*
>
> *PARTICIPANT: No. I usually use the ones that come, you know the top five [search results] or something, do you see what I mean If I'm tapping out relapse prevention then I usually go through the top five."*
>
> *Jenny: Non-specialist project worker*

Another participant said that their ability to find information online when they needed it has diminished the importance of structured training.

> *"Um did one [training course] recently the Mental Capacity Act….and they went into so much depth that I just knew none of it was going in. It was just going in one ear and out the other. It just seemed like there was so much to learn and it felt like 'well what's the point because if the time ever comes that I need to be looking at a client's capacity and working with a client who possible lacks capacity I'll be finding out at the time, and I'll be crossing that bridge when I come to it. And all this, I'm not going to retain it'."*

Tony: Non-specialist project worker

Other common resources mentioned by SMW interview participants included Drug and Alcohol Findings (DAF), Facebook, NHS webpages, organisational intranets, online case management systems, Wikipedia and YouTube. Participants often said that they knew of useful websites but could not remember the name of them. They were however confident that they could find those websites if they needed to. This qualitative detail illuminates the reliability of the quantitative data about commonly used websites. It's possible that many SMW survey participants use websites that they were unable to recall but that that they would be able to find when necessary. Some participants used online forums, but most said that they preferred face-to-face discussion than using an online forum. Some participants did not use any forums at all, saying that they found them boring or irrelevant. Some saw the potential merit in an addictions-specific online forum.

"Yeah I think it [an addiction treatment online forum] would be really good it obviously it would have to have a lot of monitoring but I think it would be good to have a space where you could sort of feel protected enough to sort of say 'this is a weird situation, like what's your opinion? Or have you had any experience that's similar' if that makes sense. 'or do you have any links to any information about this that or the other'."

Charlotte: Engagement and assessment worker

As with online learning, participants said that it was content, rather than format that was most important to their satisfaction. If the online content answered participants' questions, aligned with their interests, or provided useful resources, then participants said they would find a website satisfying. Examples of useful resources included lectures on interesting subjects, treatment plans for use with service users and access to research papers. Despite this seeming reliance on content, the analysis of data suggests that formatting was also very important. Some participants were influenced by the look or appeal of a website, but most said they were concerned about how quickly they could do what they wanted to do. Many therefore endorsed websites with simple layouts and easy navigation. Participants valued content that answered their questions, and formatting that aided them to achieve this quickly. Several participants said that websites were satisfying if they functioned with minimal errors. If the website 'worked' then they were satisfied. This type of satisfaction seemed to be based on the importance of a website being free from errors rather than being pleasing.

"PARTICIPANT: I'm quite familiar with the Tesco's app.

INTERVIEWER: And that's nice to use?

PARTICIPANT: That's fine that's usable it does what it says on the tin, I don't get confused with it. Um, Yeah it's fine. I think the guardian app is fine. It's fairly glitch free. I know where I can find things on it. Which is pretty much what I'm looking for."

Nina: Non-specialist project worker

Despite comments that good content was more important than poor formatting, many participants talked about having a very low tolerance for errors on websites. The first, and strongest, cause of frustration was participants being unable to find the information they wanted, and many said this would cause them to stop using that website.

"I just sort of find my way around most things … and if I really can't I won't. I'll just sack it off, you know I'll delete it do you know what I mean?"

Natalie: Non-specialist project worker

"INTERVIEWER: And are there any apps and things that you find frustrating to use…?

PARTICIPANT: If I have, I've deleted them. So I can't really remember (laughs)."

Leena: Prison worker

12.3.2.2 Online learning

Much of the data about online learning has been discussed in previous results chapters, therefore a brief summary will be presented here.

The most common form of online learning discussed by participants was mandatory training modules that were based on a series of slides with a multiple-choice questionnaire at the end. These courses were provided by participants' employer organisations. The most common online courses named by participants were regulatory or risk management based. Some participants said they enjoyed interactive animations, case-studies and videos in online learning, but noted that these were rarely provided. Participants talked about being able to ignore the learning content of mandatory training courses and just take the final multiple-choice questionnaire. Some rationalised this, saying that online learning was about auditing compliance rather than training staff (a

perspective shared by KSH participants). Very few participants saw online learning as a positive or effective educational tool.

Participants said that the benefits of online learning were that was flexible, easy to access, and that it could be completed in small sections. Participants valued online learning where the content was relevant and the education level appropriate. Interactive elements were also valued, with some participants having enjoyed learning that had been 'gamified'. Conversely, many participants said they did not enjoy learning in front of a computer, experiences that were often linked with having to read large amounts of text. Other frustrating experiences included online learning where the content was perceived to be irrelevant, and where the level was too basic or too advanced. Many bad experiences of online learning were based on mandatory training which was often seen as a chore.

12.3.3 Qualitative interview findings: Key stakeholder participants' use of internet resources

Most data about online learning from KSH (n=14) has been presented in previous results chapters. The most useful relevant perspective from KSH for this objective, was the ability to monitor progression and completion of training among SMW. A second note was that online learning was considered good for disseminating knowledge but bad for training skills or therapeutic interventions.

> *"Yeah definitely. At the moment we're we are making, we're updating our two day CBT face to face training but it is going to involve an online module so basically all their introduction stuff, all the information, I think can all go online, but it's more sort of practising yourself, practicing interventions role playing with other practitioners, which I think has to take place face-to-face."*
>
> *Jasmine: Training (KSH)*

12.3.4 Summary

The results that relate to objective 10 are summarised in Table 54. Participants use a large number of disparate websites to search for information about addiction. The most popular resource was provider organisations' intranets, with these used by just under a third of participants. The most common way to use the internet was by using Google to search for information or resources. Participants found these resources helpful but were sometimes overwhelmed by large amounts of conflicting information. Participants viewed the relevance of online content was as most important for quality resources, with formatting that enable easy access to this content also valued.

Experiences of online learning were mostly formed through mandatory training courses that were almost universally unpopular. Most online learning modules were used by both KSH and SMW as a skills audit that met regulatory drivers. Online learning was valued when it was flexible, interactive and fun. Participants did not like text or reading-based online learning. Most online modules were 20 mins to an hour long, but participants could see the benefits of small refresher, and long in-depth learning modules.

Table 54: Summary of results relating to Objective 10

To identify the types of internet resources commonly used by the substance misuse workforce

Survey data	SMW Interview data	KSH interview data
Popular online resources included organisational intranets, Drink and Drug News, Talk to Frank, the National Treatment Agency / Public Health England website and NHS resources There was a wide range of other online resources used with few common websites among them	SMW participants searched the internet for resources that related to their service users' needs, they also used the internet to find details of local agencies for making referrals SMW regularly carried out unstructured Google searches Many SMW were unable to remember websites that they commonly used, but knew they could find them if necessary SMW were ambivalent about the value of online forums Content of online resources is of primary importance. Although the format needs to aid SMW in finding information quickly SMW had a very low tolerance for errors on websites Online learning for SMW was predominantly mandatory training which was treated as a skills audit and is unpopular Many SMW disliked online learning but valued its flexibility	KSH valued the ability to use online learning to audit SMW training completion KSH saw online learning as effective for training SMW on information-based subjects, but as ineffective for training SMW on therapeutic interventions or for skills-based learning

SMW = Substance misuse workers; KSH = Key Stakeholders

12.4 Objective 11: To understand the confidence and competence of substance misuse workers in using internet technologies

The quantitative results describe the amount of time participants spent using the internet as well as their digital literacy scores. The qualitative results summarise participants perceptions of their ability to use the internet.

12.4.1 Quantitative survey results

Participants reported using the internet for a median of two hours per day at work and two hours per day at home, with a total median time of four hours per day spent online (Table 55). The least time spent on line was zero hours and the maximum time was twelve hours per day.

Table 55: Time spent online at work and at home (n=200)

Location of internet use	Median	Min	Max	IQR	No response *n* (%)
Hours spent using the internet at work	2	0	10	1-4	1 (0.5)
Hours spend using the internet at home	2	0	5	1-3	4 (2.0)
Total hours using the internet	4	0	12	2.5-7	5 (2.5%)

IQR = Inter-quartile range

The mean digital literacy score was 3.1, with a standard deviation of 1.0. Accordingly, there were some participants with low digital literacy scores and some with high digital literacy scores. (Table 56). The digital literacy of participants did not change between latent class subgroup membership, nor was it related to participants' experience or education. It was however related to participants' preference for online learning. The average digital literacy of participants who preferred online learning as a learning method (M=3.35, SD=1.01) was higher than the digital literacy of participants who did not prefer online learning as a learning method (M=2.83, SD=0.92, t(183) = -3.73, p<.001).

Table 56: Digital literacy reported by education level (n=200)

Participant group	Mean (SD)	df	*f*	*t*	Sig.
All participants	3.07 (0.99)				
Education					
Degree or above	3.12 (0.97)				
All other qualifications	3.00 (1.02)	184.57		t=-0.781	p=.436[a]
Latent class analysis subgroup					
Recovery Keyworkers	3.00 (0.95)				
Non-specific SMW	3.02 (0.98)				
Prescribers	3.21 (1.07)	1	f=0		p=.988[b]
Experience					
Under two years	3.31 (1.03)				
Two to five years	3.17 (0.98)				
Over five years	3.00 (0.99)	1	f= 2.865		p=.092[b]
Preference for online learning					
Preferred learning method	3.35 (1.01)				
Not preferred	2.83 (0.92)	183.39		t=-3.729	p<.001[a]

df = Degrees of freedom; SD = Standard deviation; SMW = Substance misuse worker
a = T-test; b= One-way ANOVA

12.4.2 Qualitative interviews findings: Substance misuse worker participants' confidence using online resources

There were few results of note in these analyses. On answering questions about internet competence, most participants said they were able to use the internet but did not add much detail or insight to these statements. There were, however, two items of interest, and these are presented here.

Most participants were satisfied that they were able to use the internet. Some noted that a badly designed website might prevent them from accessing information but did not attribute this to their own abilities. This relates to the findings presented above where participants thought that format did not matter to their use of a website but would quickly stop using a website if it was slow or contained errors. The analysis suggested that few participants struggled to use online resources because they only used resources they found easy to use.

"INTERVIEWER: How good would you say you are at using the internet on a scale of 1 to 10?

PARTICIPANT: Well it's just like anything's yeah alright I suppose, I don't know 8? …It's not a problem, once you've done it you've done it haven't you it's like driving a car. Once you know how to do it you. Like everyone I get in loops sometimes and think 'how did that happen?', it's normally the site isn't it the site's having a problem."

Orla: Non-specialist project worker

Few participants said that they assessed the quality or accuracy of online resources, although some noted that it could be difficult to discern whether information was accurate. Just two participants mentioned strategies that they would use to assess the reliability of online resources. One would assess the quality of the resource on the quality of the argument they presented. The other assessed the quality of a website based on the reputation of the organisation presenting it.

"I literally Google … and then it's NCBI or something like that? That tends to be one of the ones that's a good source to get stuff from. So I'll kind of look at that, and then the further down you go when it comes like 'Matt's drug page'. I think I'm not really going to look at that one."

Nick: Non-specialist project worker

12.4.3 Summary

The results relating to Objective 11 are summarised in Table 57. There was a wide range of digital literacy among SMW which was not explained by differences in educational qualifications. Participants spent a median of four hours per day using the internet. Even participants who did not enjoy using online resources and who saw themselves having low levels of digital literacy would more often consider a website to be badly designed if they struggled to use it. Often, even small errors on websites would cause participants to stop using them. This practice reinforced the view of SMW that they were able to use most online resources with ease.

Table 57: Summary of results relating to Objective 11

To understand the confidence and competence of substance misuse workers in using internet technologies

Survey data	SMW Interview data	KSH interview data
SMW participants spent a median of four hours on the internet SMW participants had a wide range of digital literacy Differences in digital literacy were not related to latent class subgroups or to education or experience High digital literacy was associated with having a stronger preference for online learning as a preferred method	Most participants felt confident in using online resources, but most also acknowledged that they gravitate towards websites that they felt confident in using. Most difficulties using online resources were attributed to poor design of those resources	No KSH data were used to meet this objective

SMW = Substance misuse workers; KSH = Key Stakeholders

12.5 Summary

Participants use a range of technology to access the internet. The technology they used at work could be unreliable and slow. Many participants did not have their own computer at work, many also did not have their own desk. Participants used a wide range of online resources including their organisation's internet, online case management systems and online learning. Many used Google to search for information about research and EBP, although there were few resources that were considered reliable and useful; instead unstructured searches would be routinely conducted. Online resources were seen as useful if they contained worksheets or other materials that could be used in addiction treatment. SMW participants' experiences of online learning were predominantly formed through mandatory training courses which were unpopular. Despite this, many participants valued the flexibility of online learning and could see the potential in short refresher courses. Few participants saw themselves as struggling to use online resources, although a wide range of digital literacy was identified. The interview data suggest that participants would blame poor web-design for difficult online experiences, further they would stop using websites that they considered hard to use. Consequently, all their online experiences were simple, and they considered themselves to be proficient at using the internet.

13 Discussion

The principal aim of this thesis was to identify key factors relevant to the design and delivery of online learning resources for the substance misuse workforce working in English, third-sector organisations. To achieve this broad aim, the following specific objectives were formed (Table 58).

Table 58: Study objectives

	Objectives
1.	To identify demographic and educational characteristics of the substance misuse workforce
2.	To identify the working characteristics of the substance misuse workforce
3.	To understand the range and nature of training currently accessed by the substance misuse workforce
4.	To identify the self-reported education and training needs of the substance misuse workforce
5.	To identify the education and training needs of the substance misuse workforce as identified by key stakeholders
6.	To understand the barriers and facilitators to accessing addiction education and training as experienced by the substance misuse workforce
7.	To identify what motivates substance misuse workers to access addiction education and training
8.	To identify how substance misuse workers access and use information on research and evidence-based practice
9.	To identify the technologies used by the substance misuse workforce to access the internet
10.	To identify the types of internet resources commonly used by the substance misuse workforce
11.	To understand the confidence and competence of substance misuse workers in using internet technologies

This chapter will provide a summary of the study findings before discussing their implications for each objective in turn. The findings and results will be compared to the existing literature and to the theories and models that framed the research as discussed in Chapter 9. The chapter will then describe the strengths and limitations of the study.

13.1 Summary of results

13.1.1 Participants

Two thirds of the substance misuse worker (SMW) survey participants were female, they were predominantly white British, and the most common age category was between 41-50 years old. The mean length of time working in addiction treatment was nine years. There was a wide range of education among the sample, three quarters had an addiction-specific qualification, and many had a National Vocational Qualification (NVQ) in Health and Social Care. Participants were motivated to access formal training by a desire to improve treatment outcomes for service users, but were also motivated by career development, their own personal development and their fascination with the subject of addiction. Participants were often highly motivated by small but visible improvements in service users' lives, such as getting housed or contacting their family, and valued training that could engender such improvements.

There were few formalised working roles across addiction treatment services. Some participants attributed this to differences in local needs, others to the constant change in service provision from recommissioning. Six out of ten participants had experienced recommissioning, and many described the process as highly stressful and disruptive. Training provision was often disrupted during recommissioning processes, and the associated reductions in funds were perceived to reduce the capacity for participants to provide therapeutic support to service users. Most key stakeholders (KSH) thought that recommissioning decisions were based primarily on reductions in the cost of treatment delivery; although some KSH thought that improvements in the quality of service provision was also a factor.

SMW participants' work mostly comprised key-working, one-to-ones and caseload work with other tasks including care planning, groupwork, prescribing, recovery reviews, referrals, risk assessments and therapeutic interventions. Routine tasks often varied according to the presenting needs of service users. Most participants were frustrated with the amount of administrative and data-related work they were required to complete, work that was easy for some, but onerous for others. Many noted that the time taken to complete administrative tasks reduced their capacity for interaction with service users. Very few participants had attended training in administrative tasks.

Participants said that they occasionally used manualised therapies, but rarely with high fidelity. Instead, sections or elements were often selected from manuals and delivered in isolation. Participants preferred interventions that could be delivered flexibly and where an immediate outcome could be observed. This partially explained the value placed on alternative therapies such as acupuncture and mindfulness by participants.

KSH participants' roles were dominated by ensuring service delivery met legislative and regulatory requirements (such as the Mental Capacity Act 2005 and the Care Quality Commission (CQC)'s inspections), by management, performance management and by developing organisational strategy. The regulatory drivers of the CQC meant that KSH were frequently involved in audits of addiction treatment services to ensure that they would pass future inspections.

13.1.2 Training

Participants named over 40 training courses available for SMW. Many expressed a need for administrative skills training, a need that contrasted with low levels of motivation for attending such training. There was a high need for training in reflective practice and in building therapeutic relationships, neither of which were commonly available. Participants said there was a lack of training in advanced clinical techniques for experienced staff, with most training designed to meet the needs of new SMW. Training that was directly related to participants' work with service users, that was interactive and that encourage personal development was seen as high quality. Participants said that attending training helped them build confidence and manage stress. Free training was preferred, but training that might enable services to save money was also highly valued.

Many staff had to complete a range of annual mandatory training courses. Most of these courses were designed to meet regulatory requirements and were usually provided online. Mandatory training was unpopular among SMW participants, and often used by managers to audit completion of training, rather than to improve the skills or knowledge of SMW. Online learning was often referred to by SMW as not meeting the needs of active learners. In addition to formal training, many participants learned by discussing issues with their peers or by shadowing more senior colleagues. Peer learning often happened outside of formal training structures, although for new staff, shadowing was often arranged as part of an induction process.

The most common barriers to training were that participants did not have enough time to attend training and found it difficult to travel to training locations. Despite over 40 named courses, a common barrier to training was a lack of training that SMW participants wanted to attend. Online training provided partial solutions to some barriers to training and consequently improved access to training. Many participants valued the flexibility of online learning and valued the ability to complete it at convenient times and locations whilst being able to stop and re-start modules. Over half the survey participants shared a computer or had limited access to the internet. Many used slow computers with no sound and many were reliant on intermittent Wi-Fi connections.

13.1.3 Online resources

Participants regularly searched for online materials and treatment resources using Google. Most participants used the internet to gain access to large amounts of information, but could find this information difficult to comprehend, sometimes contradictory and often overwhelming. Organisational intranets were perceived to be easy-to-use repositories of information about treatment. There were 157 websites named by survey participants, few were commonly used with most mentioned by small numbers of participants. The most popular addiction-related websites (excluding organisational intranets) were Drink and Drug News, Talk to Frank, Public Health England (PHE) and NHS.

Participants learned about research and evidence-based practice (EBP) through online resources, peer learning and formal organisational training. Most information related to research and EBP was sought from the internet, using Google, with webpages selected from top search results. For some participants the quantity of online information made it difficult to access information on research and EBP and few reported critically appraising the information they found. Subject matter experts known to SMW and KSH were perceived to have the time and ability to screen and select relevant information. Online resources relating to research and EBP were considered most valuable when they directly related to work with service users. National guidelines, regulations and policies were not well used by SMW participants, although KSH participants reported using them to inform organisational policy and systems. Some participants thought that clinical guidelines were irrelevant to them because they did not deliver 'clinical' interventions.

There were few frustrating online experiences recalled by participants. Where participants found websites frustrating to use, they often stopped using them. Therefore, participants just had either good experiences of websites, or websites that they did not use.

13.1.4 Latent class analysis

The latent class analysis (LCA) was based on whether participants delivered prescribing, high levels of psychosocial and recovery interventions, and whether they carried a caseload. The analysis was designed to identify subgroups of participants defined by their working characteristics. These subgroups were then used to identify how the learning needs and preferences of SMW might differ according to their working characteristics. This follows the UCD principle of using research data to develop personas. Personas represent research-based summaries of different types of 'end-user'

which can then be used to test whether design suggestions meet the diverse needs of multiple end-users (Cooper et al., 2014). Personas have previously been used in healthcare settings to ensure healthcare interventions meet the needs of specific patient groups (LeRouge et al., 2013). The LCA identified three subgroups from the data; these were named by the researcher as Recovery Keyworkers, Non-specific SMW, and Prescribers.

13.1.4.1 Latent class subgroups: Recovery Keyworkers

Recovery Keyworkers were more likely than the other subgroups to carry a caseload and to deliver high levels of psychosocial and recovery interventions. They had a high probability of delivering prescribing, but not as high as participants in the Prescribers group. The Recovery Keyworker group comprised 29% of participants.

Sixty-seven percent of Recovery Keyworkers had an addiction-specific qualification, which is the lowest level of all the subgroups. Recovery Keyworkers training need priorities were in Behavioural Couples Therapy (BCT), psychostimulants, and Contingency Management (CM), their need for, and interest in, all types of training was lower than for the other subgroups, indicating low motivation for all types of training. Recovery Keyworkers were most interested in training on intervention techniques, dual diagnosis and interpersonal therapeutic techniques, and their most preferred form of learning was through external training courses, internal training courses and attendance at conferences and seminars. They had a higher preference for mentoring than Prescribers. Recovery Keyworkers were the subgroup most likely to have their own computer at work with good internet access.

13.1.4.2 Latent class analysis: Non-specific SMW

Non-specific SMW were less likely to deliver recovery or psychosocial interventions than members of the other two subgroups. They had a moderate probability of prescribing and a low probability of carrying a caseload (although still higher than Prescribers). Non-specific SMW was the most common subgroup accounting for 44% of participants.

Non-specific SMW had the highest levels of addiction-specific qualifications at 87%. They were most interested in training on BCT, CM and psychostimulants, and were more interested than the other subgroups in training on ‘education, training and employment’. Non-specific SMW were most interested in training on dual diagnosis and interpersonal therapeutic techniques. Their interest in these areas was higher than the average for the sample. They also had a higher than average

interest in advanced clinical techniques. Their preferred learning methods were internal training courses, external training courses and attendance at conferences, and they were more positive about all these training methods than Recovery Keyworkers. Non-specific SMW had a greater than average interest in learning through project work and working along more experienced colleagues. Under half of this group had access to their own computer with full internet access and they were more likely to have restrictions on their access to the internet than the other subgroups.

13.1.4.3 Latent class analysis: Prescribers

The Prescribers group comprised 26% of participants and was defined by having a high probability of delivering prescribing and recovery interventions, a low probability of carrying a caseload and a moderate probability of delivering multiple psychosocial interventions.

Seventy-two percent of Prescribers had an addiction-specific qualification which was a higher rate than for Recovery Keyworkers and a lower rate than for Non-specific SMW. Prescribers were most interested in training on BCT, CM, and psycho-stimulants. They identified a higher interest in, and need for, training on all subjects than the other subgroups, indicating a high motivation for learning. Prescribers had a higher interest than the other subgroups in theories and concepts and were most interested in training on specific therapeutic activities, interpersonal therapeutic skills, and intervention techniques. This subgroup preferred training delivered through external training courses, internal training courses and attendance at conference and seminars. They were the least likely of all the subgroups to have their own computer with unrestricted internet access with only a third reporting this. They were the most likely subgroup to share a computer and to 'hot-desk'.

13.1.4.4 Latent class analysis: summary

The LCA did not identify substantial differences in training needs and preferences according to working characteristics. The largest subgroup identified in this analysis was Non-specific SMW; their defining feature was their lack of work related to caseload, recovery, prescribing or psychosocial interventions, raising questions about their work characteristics and routine tasks. Interview participants said they carried out many tasks that were unrelated to those interventions. These included alternative therapies, answering telephones, case load management, case notes, completing assessments, groupwork, making referrals, mindfulness, responding to emails, risk assessments, team meetings and training (online or face-to-face). Many commented that the part of their job involving therapeutic interventions was relatively small. Therefore, the LCA in the present

study was potentially based on variables that constitute a relatively small part of the work completed by SMW. The analysis of interview data identified five types of routine task common to SMW participants: assessments, key-working, liaison with external agencies, prescribing and groupwork. Future studies should perhaps use these variables to identify subgroups of SMW for analysis.

Another way to identify subgroups of SMW to aid the design of online learning would be to use variables related to training preferences. This would enable research to identify subgroups defined by differences in training needs and preferences from which the associated working contexts of those subgroups could be extrapolated. It is also possible that there are no well-defined subgroups among third-sector SMW. They may be a population defined by a range of needs and a range of roles. The finding of the present study was that the training needs and preferences do not substantially differ across working contexts; a finding that is useful for the design of online learning resources. The temptation to continue analysing the data until differences in learning preferences are identified would risk prioritising a significant result over a result that meets the objective in identifying how the working contexts of SMW impact on the design of online learning resources.

This chapter will now discuss the implications of the present study's findings sequentially, according to the study's objectives. This discussion will contrast the findings with previous studies and summarise how they can be used to optimise online learning for SMW.

13.2 Objective 1: The demographic and educational characteristics of the substance misuse workforce

Participants' demographic characteristics were similar to those reported in the National Treatment Agency (NTA) training needs analysis of 2003 and largely reflective of the other studies of SMW discussed in Chapter 7. These similarities give some reassurance about representativeness of the sample. Sixty-six percent of participants were female; results in previous studies of UK SMW reported gender ranging from 52% to 76% female (Sheridan et al., 2011, Albery et al., 2003, Farmer, 1995, Oyefeso et al., 2008, Mazoruk et al., 2017, Luty and Rao, 2008, Mills et al., 2003 , Schulte et al., 2010). These results reflect the gender balance in other healthcare settings where more female than male staff are often found. For example, 77% of the NHS workforce are female (NHS Digital, 2018a) although this falls to 36% in senior roles. The gender of participants in the present study differs from the gender profile of addiction treatment service users where male service users make up 69% of the treatment population. It is important that EBPs are delivered in a way that considers the

characteristics of both SMW and service users. Accordingly, for SMW to deliver effective interventions, training must include issues of diversity that relate to the demographic characteristics of SMW and to those of addiction treatment service users. Research that explores how differences in the demographic characteristics of SMW and addiction treatment service users influence therapeutic relationships and treatment outcomes would be of value. Such research would also enable online learning to address such issues and ensure any such barriers to treatment were minimised.

Participants in the present study were older than participants in previous studies of SMW. The most common age range of participants was between 41 and 50 which compares to the most common age range of between 31 and 40 in the 2003 NTA training needs analysis (Mills et al., 2003) and a mean age of between 34 and 40 in other studies of UK SMW (Oyefeso et al., 2008, Albery et al., 2003, Farmer, 1995, Mills et al., 2003, Mazoruk et al., 2017, Schulte et al., 2010, Sheridan et al., 2011). In the early 2000s the investment in addiction treatment services caused the sector to increase capacity, with a raise in the number of job opportunities available. The subsequent reductions in funding from 2011 (Advisory Council on the Misuse of Drugs (ACMD), 2017) combined with recommissioning processes suggest that there are fewer jobs in addiction treatment in 2018 than in 2003. Participants here had an average of nine years' experience in addiction treatment services suggesting that there are not large numbers of new SMW. This also suggests that difficulties in retaining SMW noted in previous studies are were not backed up by data in the present study (Roche and Nicholas, 2016, Hoge et al., 2013). Despite this high retention of SMW in addiction treatment, provider organisations still appear to experience high turnover, not from SMW leaving the sector, but from SMW transferring to other organisations through recommissioning.

The implications of an older workforce for online learning are few, the confidence with which people use online learning resources often is more closely related to digital literacy and experience than age alone (Dobransky and Hargittai, 2012, Van Deursen, 2012). The implications of SMW age for the design of online learning are less important than the implications of an experienced workforce whose interests are in advanced levels of training. This contrasts with findings in the present study suggesting that current training is usually designed for new staff and that provision of training in advanced therapeutic techniques is scarce, despite over 70% of participant having worked in addiction treatment for over five years.

The ethnicity of participants in the present study was 86% white British, which closely aligns with other studies reporting the ethnicity of UK SMW (Mills et al., 2003 , Schulte et al., 2010). This closely reflects the ethnicity of those using addiction treatment services which was estimated at 85% white

in 2016/17 (Public Health England, 2017a), and is similar to the ethnicity of staff in NHS services which was estimated to be 80% white in 2017 (NHS Digital, 2018b).

The demographic characteristic most relevant for the design of online learning resources was the wide range of education. Some participants had no GCSEs whereas others had postgraduate qualifications. Many studies of the Technology Acceptance Model (TAM) have been based in higher education settings or workplaces where the study population have shared educational characteristics (King and He, 2006). This indicates a limitation of the TAM when studying populations with a wide range of education. The data presented here suggest a population not defined by, or limited to, an educational level. The 2003 NTA training needs analysis (that was not limited to the third-sector) found that 62% of the workforce had at least a first degree and commented that this high level of education drove a positive attitude towards training overall (Mills et al., 2003). This somewhat speculative suggestion that education was related to positive attitudes towards training was not reflected in the data here. The present study identified no differences in training interests, or the strength of those interests, between people with a first degree and those with lower levels of education.

Previous diffusion studies have reported a reluctance towards delivering EBP among people with low levels of education (Aletraris et al., 2015, Lundgren et al., 2011b, Rash et al., 2012), a finding also not supported by the data here. The present study identified few ideological objections to evidence-based therapeutic interventions; a finding that contrasts with previous studies' reports that the ideological objections of staff can act as a barrier to diffusion of interventions (Sinclair et al., 2011, McGovern et al., 2004, Aletraris et al., 2015). Objections to EBP, when raised in the present study, were based on practical delivery concerns or on evidence of efficacy. These objections map well on to the TAM where the view that EBPs were too inflexible reflects an intervention that is not easy to use; and the view that EBP are ineffective reflects an intervention that is not perceived to be useful. The relationship between ideological and practical objections to delivery of EBP is uncertain, but worthy of exploration, however, online learning that demonstrates the ease with which EBP can be used as well as its efficacy may reduce barriers to their delivery.

One advantage of online learning resources is that they can be navigated by users who can then select resources that meet their individual needs and preferences (Ruiz et al., 2006, Cook et al., 2008). The internet design term 'accelerators' refers to website features that enable advanced users to access complex content, but which are largely unseen by people with more basic requirements (Nielsen, 1994, Nielsen, 1993). Accelerators could enable people with a degree or above to access content designed to meet their educational needs, without deterring people with lower levels of

education (D'Ippolito et al., 2015). The personalisation of resources for different groups of users is an evidence-based way to improve the quality of online learning (Adam et al., 2017, Scott et al., 2017a). In addition to accessing personalised material, self-selection can have further benefits. Lyekin and colleagues found that greater control over online learning (through learner selection of resources) was associated with reduced stress and burn out scores among addiction counsellors (Leykin et al., 2011).

In the interview data, SMW with low levels of education but with good communication skills were described as highly skilled workers. SMW with high levels of education may find academic language easier to understand, but there was no evidence suggesting that they would require training in more advanced therapeutic interventions than SMW with low levels of education. Training in complex and advanced interventions will meet the needs of SMW with a first degree as well as SMW with no academic qualifications. Following the TAM, this suggests training subjects that are perceived to be useful are unlikely to change according to education level; but that what is perceived to be an easy-to-use format (the way in which those subjects are presented) is likely to change with levels of education. Furthermore, it would be misguided, according to the data presented here to associate higher levels of education with higher digital literacy, an issue discussed in more detail below.

13.2.1 Addiction-specific qualification

Over three-quarters of participants had an addiction-specific qualification, indicating that the NTA drive for a qualifications framework (Nelson, 2016) and Drug and Alcohol National Occupational Standards (DANOS) (Skills for Health, 2008) were partially effective (Ashwood and Rowley, 2016) (Duke, 2010). It may also explain the finding that participants who had been working in addiction treatment services for between two and five years had the lowest levels of addiction-specific qualifications, having begun work in addiction treatment when oversight transferred from the National Treatment Agency (NTA) to Public Health England (PHE) and the emphasis placed on addiction-specific qualifications and DANOS was further reduced (Advisory Council on the Misuse of Drugs (ACMD), 2017, Ashwood and Rowley, 2016).

SMW do not need to have an addiction-specific qualification to work in addiction treatment services, yet many participants reported having such a qualification. This reflects the commitment to education and to treatment quality within the sector previously noted by Sheridan and colleagues (Sheridan et al., 2011). These high levels of addiction-specific qualifications provide some reassurance about the current skills of SMW, but the data also provide reasons for caution. One participant who was also an NVQ assessor said that it was possible to gain an NVQ but to learn

nothing, a sentiment reflected in the experiences of many SMW participants. Training for SMW must be of high quality to prevent a workforce spending considerable time gaining a qualification on which little value is subsequently placed. Low quality training is not only ineffective, but also reduces the time available for direct addiction treatment delivery, contributes to the administrative burden on SMW and reinforces negative perceptions about the value of training and education.

13.3 Objective 2: The working characteristics of the substance misuse workforce

For online learning to be successful and well used, it must align with wider structural factors that will influence its delivery and uptake. Rogers specifically notes the importance of understanding the social systems within which change is expected to happen (Rogers, 2003). Roche and colleagues have extensively explored the different levels of addiction treatment systems that affect workforce development (Roche and Nicholas, 2016). Even optimal forms of online learning may be unused or considered irrelevant if they do not accommodate common working practices or organisational structures (Cooper et al., 2014). In 2011, Sheridan and colleagues commented that addiction treatment in England was delivered within complex structures amongst competing ideologies (Sheridan et al., 2011), a finding supported by the present study that reported disruption from recommissioning, diverse treatment structures, obscure referral routes, and non-standardised training provision. A further example of this complexity is in the large number of incomparable job titles held by participants, a finding also reported by Mazoruk and colleagues in a recent study of drug and alcohol services in England and Wales (Mazoruk et al., 2017). However, beyond these observations, none of the studies of UK SMW identified in Chapter 7 provide detail about the working contexts of SMW, thus limiting the ability to compare their findings with those of the present study.

13.3.1 Administrative work and regulatory pressures

The strongest theme of participants' working context was the preponderance of administrative work. The importance of administrative work was widely acknowledged by participants, reflecting evidence that such work can reduce patient errors and improve quality of care (Waneka and Spetz, 2010). Many acknowledged that this work was important and that it consumed a lot of time yet remained reluctant to accept such work as integral to their job. The analysis here indicated that participants viewed administrative work to be a necessary, but undesirable part of what was

primarily a therapeutic role. This self-image is reflected in the reasons given by participants for working in addiction treatment settings, reasons based on supporting service users to change through therapeutic means. This perspective could help explain the simultaneous need for and lack of interest in administrative training. When viewed from a User-Centred Design (UCD) perspective, this indicates a mental model of addiction treatment work. A mental model consists of a simple description of a product on which assumptions about its function or use are based. This perspective would help explain participants' views that administrative training was not directly relevant to their job, despite the large amounts of administrative work they seemed to complete. UCD principles suggest that design must be based on existing mental models, the implication here being that online learning resources should be therapeutic in content. However, therapeutic training should also contain elements of administrative skills training; an inclusion would meet the needs of SMW that are distinct from their wants or primary tasks.

Many of the administrative tasks reported by participants were driven by regulatory pressures and were often related to risk management. Few participants refuted the need for rigorous risk management when working with vulnerable service users, but many voiced concerns about the time-consuming nature of risk assessment work and the administrative tasks associated with regulatory compliance. Further, that the time taken to complete these tasks reduced their capacity to deliver therapeutic interventions. In training needs analyses from 2003 and 2005, risk management was identified as an unmet need (Welsh Assembly Government, 2005, Mills et al., 2003). In the present study many felt that risk management processes were now over-emphasised. The change in emphasis on risk management over time models the slow process of diffusion identified in the literature (Morris et al., 2011, Balas and Boren, 2000), whereby changes in risk management training and practice do seem to have changed since the early 2000s. The impact of these changes highlights the importance of understanding the working context in which changes must occur. The increase in risk assessment training and work has met an identified need from 13 years ago, yet the data here suggest that this increase has marginalised the ability of SMW to deliver therapeutic interventions. When planning future changes to training provision and addiction treatment delivery, policy makers must consider the working context in which those changes are to be made to avoid training SMW in (for example) therapeutic relationship skills only to diminish the capacity of SMW to complete other important tasks. The present study also identified considerable time pressures on SMW, and so it is likely that additional tasks will compromise the ability of SMW to complete existing tasks.

There were many structural drivers that ensured services met regulatory standards, but few KSH identified structural drivers for improving the quality of therapeutic treatment delivery. Many KSH,

including commissioners, reflected that they would be able to deliver low quality addiction treatment provision with few negative consequences. The CQC does aim to address issues of quality and effectiveness in addiction treatment services (Care Quality Commission, 2018) but the effect on treatment delivery evident in the present study was to drive regulatory compliance rather than quality improvement initiatives. As noted by many participants, regulatory compliance activities contribute to the quality of care in addiction treatment, and to the safety of service users. Regulatory compliance and quality improvement strategies are not mutually exclusive activities. However, regulatory compliance strategies described in the present study rarely involved improvements in the therapeutic skills, knowledge or abilities of SMW, nor did they encourage the use of EBP. There were few structural motivators identified for organisations to prioritise such improvements and several factors that would deter training, skills development and use of EBP (which are discussed in more detail below). Strategies for improving the skills and abilities of SMW seemed to rely on the commitment and motivation of SMW and treatment organisations. A reliance that further underlines the importance of identifying needs, characteristics and motivations of SMW.

Previous initiatives by commissioners to address the lack of structural incentives for quality addiction treatment provision have involved developing contracts based on payment-by-results, where increased funding is linked to improved treatment outcomes (Donmall and Sutton, 2014, Maynard et al., 2011). These contracts have, however, shown modest and mixed outcomes. One study noted that greater numbers of service users were abstinent following the implementation of a payment-by-results contract; but that treatment initiation and completion had both reduced (Jones et al., 2018). Another study reported that initiating a payment-by-results contract was associated with a reduction in treatment completion (Mason et al., 2015). Another study highlighted the complexity of measuring outcomes related to an inherently complex disorder (Maynard et al., 2011). One report said that there were considerable administrative costs to implementing and monitoring payment-by-results contracts. They also noted unintended incentives, where addiction treatment providers could 'cherry pick' service users based on their potential for achieving payment related outcomes. The report did acknowledge that these contracts could focus providers on delivering effective treatments (Donmall and Sutton, 2014).

13.3.2 Recommissioning

Recommissioning processes were identified by participants as structural factors that disrupted service delivery and training provision. The issue of recommissioning has previously been raised by the ACMD and other commentators (Advisory Council on the Misuse of Drugs (ACMD), 2017,

Macmillan, 2010). The analysis presented here indicates that, when it happens, almost all elements of treatment delivery are disrupted by recommissioning and can cause extreme and emotional reactions among SMW. These difficult experiences suggest a need for help coping with recommissioning processes. Online learning could provide information about recommissioning and Transfer of Employment – Protection of Earnings (TUPE), whilst training SMW in coping strategies; training that would also meet SMW needs for personal development. Stress and burnout have been repeatedly identified as the cause of low quality treatment provision and reduced patient safety (Hall et al., 2016, Glasberg et al., 2007). Good training provision has been linked to reduced stress and burnout among SMW (Leykin et al., 2011), a finding reflected by participants in the present study. However, in the data presented here, training provision often stopped during recommissioning. Disruption to training provision and treatment delivery from recommissioning can be ameliorated by online learning resources that are continually available and provide information and support related to recommissioning processes.

Recommissioning seemed to have become a common factor in the working lives of many participants in the present study, therefore online learning resources must acknowledge recommissioning in order to be contextually relevant, as emphasised by principles of UCD (Cooper et al., 2014). For example, online training in CM should include suggestions on what to do if services are recommissioned during a course of CM. Training in assessments should acknowledge that assessment procedures are subject to change following recommissioning whilst giving advice on how to manage this process

One further aspect of recommissioning identified here was that it provided a routine incentive against the professionalisation of the substance misuse workforce. Most KSH thought that the competitive tenders and recommissioning decisions were largely influenced by an aim to reduce the cost of treatment. This drive to reduce costs, combined with the low cost of non-professional SMW provided a structural disincentive to implement a mandatory qualification for SMW. The routine transfer of staff between organisations through TUPE created another structural disincentive to training, whereby trained staff may soon work for a competitor organisation. It is important to note that this disincentive for training staff was identified by KSH in the present study, but no KSH reported deprioritising training because of those disincentives. The motivation to improve quality through staff training again appears to be driven by high levels of commitment among individuals and organisations rather than because of any structural incentives.

13.3.3 Professionalised workforce

The issues relating to a professionalised addiction treatment workforce were not solely related to costs. Many SMW and KSH participants were ambivalent about the importance of SMW skills in addiction treatment provision. The present study suggested that many SMW and KSH considered the most important skills for SMW to be politeness, and good communication; and that outcomes from other therapeutic interventions were likely to be marginal by comparison. The implication was that there is little need for skilled and trained professionals, just welcoming people who can naturally develop good therapeutic relationships. Such assumptions were based on participants' experiences working in addiction treatment rather than on research and evidence. The implications for online learning are twofold. First, that there is a need for training to develop therapeutic relationship skills which are perceived to be essential for high quality treatment delivery, and second, that individual therapeutic interventions are not always perceived to be effective. If online learning is to be prioritised against other work commitments, it will need to demonstrate to sceptical SMW that the skills it seeks to train will contribute to improved service user outcomes.

Research evidence neither accords with nor refutes many of the assumptions behind these views. The literature indicates that training can improve treatment outcomes, but that those effects can be inconsistent and modest (Cook et al., 2008, Walters et al., 2005). There are few studies that measure the impact of training on treatment outcomes. Sinclair and colleagues' 2016 systematic review of randomised controlled trials found none that studied the effect of training on patient outcomes (Sinclair et al., 2016). There is a similar paucity of research on the relative importance of personal characteristics compared to skills learned through training on treatment outcomes. Current assumptions among SMW and KSH about the low importance of skills and high importance of personal characteristics act as a barrier to developing a professionalised workforce and to accessing training. Therefore, research exploring this area could have an impact on levels of interest in education and training in addiction treatment services.

As discussed above, there were few reported drivers for improving the quality of addiction treatment and therefore for investing in the skills of SMW. Several participants suggested that the stigma faced by service users was such that the public opinions were unconcerned by low quality addiction treatment. These sentiments echo the thoughts of commentators about the influence of public perceptions on public funding allocation (Buck, 2016). It is an interesting suggestion, and one worth exploring in future research. However, the increased investment in addiction treatment services during the 2000s was made by politicians working within public and media perceptions (HM Government, 1998, Monaghan, 2012, Reuter and Stevens, 2007). The suggestion that online learning

for SMW remains of low quality because of public perceptions about treating addiction summons a long causal line that must be viewed with caution.

13.4 Objective 3: The range and nature of training currently accessed by the substance misuse workforce

13.4.1 Experiences of face-to-face and online learning

The present study sought to identify how to optimise online learning for SMW, and in doing so identified examples of suboptimal face-to-face learning, with the variable quality of trainers being a common cause of frustration. The issues of variable quality in face-to-face learning may contribute to the range of results in studies comparing face-to-face and online learning methods (Cook et al., 2008, Jackson et al., 2018, Calder et al., 2017). Research that compares face-to-face training of uncertain quality to online learning of uncertain quality does little to improve the reliability of findings in this area. These implications highlight the advantage of online learning in that the quality of training provision is not altered by an individual trainer. Once the content is set, it can be exactly replicated, often year after year in the form of refresher training.

Current experiences of mandatory online refresher training provided some indications about KSH and SMW perceptions of online learning. A common mental model of online learning identified in through analysis in the present study, was that online learning is effective for knowledge-based training but not for skills development. There has been good evidence that online learning can be as effective as face-to-face learning in both knowledge and skills-based subjects since 2008 (Cook et al., 2008), indicating that dissemination of research into online learning has been slow in addiction treatment settings. However, the mental model of online learning as a knowledge-based form of learning persists; and is a model that designers must accommodate (Cooper et al., 2014). Some SMW and KSH continue to doubt the effectiveness of online learning resources in developing skills, perceptions that will, according to the TAM, deter use of skills-based online learning resources (Venkatesh and Davis, 2000). It is possible that mental models of online learning will change over time, with new experiences, however, until perceptions change, online learning resources are more likely to be used if they overtly target information-based training than if they target skills-based training. To help change perceptions towards online learning, skills-based training should be delivered within larger information-based training modules to meet the needs of SMW without deterring their participation.

The common practice of SMW participants disregarding the educational material of current mandatory online learning to complete the end-of-module test indicates that online learning has, for many SMW, become a bureaucratic exercise. These data also provide useful information for the design of online learning resources. The practice of using current online learning as a skills audit indicates that existing online resources partially meet the needs of both SMW and KSH. SMW have a need to quickly complete what is viewed as an administrative burden and are able to achieve this by clicking through the educational content. KSH have a need to demonstrate that SMW have completed mandatory training and are able to do so by auditing staff completion of modules. Both needs are met through current online learning provision, despite neither of these needs being related to learning.

Within this process is the potential for small adaptations to enable access to personalised online learning resources. Current training involves SMW completing skills audits framed as online learning modules. A more targeted system might comprise an audit of learning needs that does not require SMW to go through educational material first. This audit could be used as a formative assessment to guide SMW towards personalised learning resources where completion would meet both regulatory requirements and the individual needs of SMW. The structures currently exist for addiction treatment services to conduct formative assessments from which personalised training could be formed. They are, however, currently dominated by summative assessments for the benefit of external regulatory agencies. Targeted and personalised online learning meets the principles recommended by online learning research (Finch and Jacobs, 2012, Fontaine et al., 2017) as well as the recommendations of Cook and colleagues' meta-analysis of instructional design features (Cook et al., 2013).

There are indications that SMW perceptions of online learning are changing. In the 2011 Scottish training needs assessment only 20% of participants were in favour of using e-learning (Smith, 2011) whereas the present study found that 45% of participants saw online learning as a preferred learning method, although differences in the setting and sample may also explain these differences. The change could also reflect the substantial increase in the use of online resources since 2011 (Office for National Statistics, 2018). As online resources become increasingly used, many people become comfortable with using them.

13.4.2 Use of peers

Another common form of learning occurred when participants asked peers, colleagues or subject matter experts for information or advice. As reflected by Rogers (Rogers, 2003) and in empirical

studies (Duchanne et al., 2007), SMW routinely share information with colleagues and can find this a persuasive way of learning. Subject matter experts in the present study were often identified as experienced members of staff for whom there were low levels of training. One barrier cited by KSH to providing training courses for experienced SMW was the cost of providing training for small numbers of people. Data from the present study suggest that knowledge and skills gained from advanced training courses will be used by many more SMW than just those attending the training. The potential for peer-to-peer dissemination is an important consideration for the design of online learning resources. According to the principles of UCD, dissemination among peers is likely to be a primary task for subject matter experts and experienced SMW; and is therefore a goal that should be facilitated by well-designed online learning resources (Cooper et al., 2014). Advanced training courses should therefore be designed for experts and include resources to aid dissemination and diffusion. The influence of peer-to-peer learning in addiction treatment settings is a potent force for diffusion (Rogers, 2003), but it is not currently facilitated by training nor explored by research.

13.5 Objectives 4 and 5: The education and training needs of the substance misuse workforce

The first step in identifying useful and relevant training for any population, is to identify their training needs (Adam et al., 2017). Participants' training needs in the present study differed from those highlighted in previous training needs analyses of UK SMW. An analysis from 2003 conducted by the NTA identified training needs in 'difficult, dangerous and disturbing behaviour', 'diversity' and 'risk management' (Mills et al., 2003). Similarly in 2005 a Welsh training needs analysis identified 'difficult, dangerous and disturbing behaviour', 'education and prevention' and 'preventing overdose' as training needs (Welsh Assembly Government, 2005). Several participants in the present study said they had attended high-quality 'difficult, dangerous and disturbing behaviour' training indicating a training need may now have been met. This again indicates that slow diffusion does occur over time (Morris et al., 2011, Rogers, 2003), as well as highlighting the potential for publication of training needs analyses to contribute to system wide change. Those previous training needs analyses also emphasised a need for many training subjects related to risk management (Mills et al., 2003, Welsh Assembly Government, 2005, Hall et al., 2000), which contrasts to the training needs identified in the present study which were focused on therapeutic skills and interventions. The preference of training in therapeutic skills in the present study further reinforces the hypothesis that SMW perceive their role as a primarily therapeutic one.

Participants did however acknowledge the importance of risk management, noting that risk assessment training had become a part of routine working structures. For example, no participants described an unmet need for safeguarding training, because this was completed annually. One reason that such training can be provided annually and across entire organisations is because of the accessibility and flexibility inherent in online learning resources (Bryce et al., 2008, Finch and Jacobs, 2012). Risk management training seems to have has become systematic and is no-longer considered to be an unmet training need indicating that online learning can be effective at disseminating information on a large scale. It also suggests that SMW training needs change as training needs are met. The changeable nature of SMW training needs also seemed to be driven by changes in drug use patterns, with psychostimulants a higher training need in the present study than in the training needs analyses of 2003 and 2005. One persistent training need identified in all analyses was for dual diagnosis training. The need for dual diagnosis training also replicated the need identified by Schulte and colleagues in 2010 (Schulte et al., 2010).

13.5.1 Advanced training

A training need identified in the present study was for advanced training for experienced SMW. The emphasis of current training provision was often on training for new staff, with many participants struggling to find relevant training courses once initial training had been completed. This lack of advanced training reflects the importance placed on advanced skills development among SMW, where basic relationship skills are perceived to be most important for treatment outcomes, and skills development through training seen to be less important. It also reflects the view that regulatory compliance training is more important than training to develop high-quality treatment provision, whereby annual compliance training is mandatory in order to meet minimum regulatory standards, but provision of advanced training is not regulated, not mandatory and of a lower priority. It is important to acknowledge that the CQC aim to conduct service audits in a way that does not drive compliance over quality (Rimmer, 2014). This intent was reflected in the present study where treatment organisations are asked what they consider to be mandatory in order for quality assessments to be contextually relevant. Despite this intent, inspections were often said to drive cultures of compliance and, in some cases, fear.

Both KSH and SMW participants considered therapeutic relationship skills to be central to treatment efficacy, yet none reported direct training in those skills. This lack of training was perhaps driven by assumptions voiced by many participants that therapeutic relationship skills cannot be trained and that the ability to form a therapeutic relationship is determined by personal characteristics rather

than through professional development. There are research studies suggesting that communication and therapeutic relationship skills can be taught online (Shafer et al., 2004, Borcsa and Pomini, 2017), particularly when using formats such as virtual patients (Hayes-Roth et al., 2004). There are other studies that suggest that many facets of a therapeutic alliance were improved through treatment delivery experience and training (Ackerman and Hilsenroth, 2003). Although the literature is relatively small in this area and more research is needed to explore the extent to which therapeutic relationship skills can be trained and developed, so that training provision can help improve performance. Training is currently provided on distinct therapeutic interventions that were seen by many participants to be of secondary importance to developing a good therapeutic relationship.

13.5.2 Administrative training

One training need that did not align with the TAM, UCD and Diffusion of Innovation (DOI) was that of training in administrative skills. Throughout the interviews, participants said that good administrative skills were important for their work but were rarely the subject of training. Both SMW and KSH participants thought that good administrative skills could improve treatment quality, risk management and patient safety; perceptions that match literature that links patient safety with good administrative management (Wang et al., 2011, Waneka and Spetz, 2010). Despite this importance administrative skills training was the subject of least interest and enthusiasm among survey participants. This combination of high relevance, high need and low enthusiasm indicates conflicting motivations whereby many would value the skills learned through training, but few would enjoy, or voluntarily complete such training. This again resonates with the mental model that SMW have of addiction treatment work. Addiction work is viewed as a primarily therapeutic activity, so even when administrative training is acknowledged as important and even valued, it is not perceived to be relevant because it is at odds with the perceptions that SMW have about the nature of their job.

13.6 Objective 6: The barriers and facilitators to accessing education and training as experienced by the substance misuse workforce

The present study identified barriers and facilitators to training, posing challenges and opportunities for online learning. Some traditional barriers to training such as accessibility can be reduced by simply placing learning online and eliminating the need to travel (Cook et al., 2008, Calder et al.,

2017). Other barriers require specific design considerations in the design of online learning resources.

Participants' main barriers to training were time, location, and competing work requirements. Findings that align with previous research (Sondhi and Day, 2014, Cook et al., 2008, Bryce et al., 2008, Ruiz et al., 2006, Hall et al., 2000). The least common barriers in both the 2000 study of social workers and the present study (identified using the same tool), related to a lack of interest in training or that previous training had been poor. This indicates that low motivation or resistance among SMW is not a common barrier to training provision, a finding that contrasts with some previous studies reporting low staff motivation for learning (Mitcheson et al., 2009). Data from the present study do however relate low motivation among SMW to mandatory training which many saw to be of little value. This further emphasises the importance of understanding the needs and interests of SMW so that their motivation does not act as a barrier to training.

Barriers of time and location are partially addressed by training in online settings. Participants do not have to travel to use online learning resources thus reducing the impact of those barriers. Many participants said they still struggled to find time at work to complete online learning, an issue raised previously by Curran and colleagues (Curran et al., 2015). Many participants said that online learning was frequently interrupted by work demands. Online learning resources must acknowledge and accommodate the distractions inherent in SMW workplaces if they are to be well used. SMW need to access online learning in short sections with progress saved between sessions. Courses that can be completed in this way may reduce barriers to training more effectively than courses requiring large amounts of uninterrupted attention.

Another barrier to training was a lack of funding to attend training, a barrier that was more directly experienced by KSH than by SMW. Rawson and colleagues highlighted the cost-effective potential of online learning (Rawson et al., 2013). Once designed, the number of learners accessing online learning modules can continue to grow and the cost-per-learner can therefore reduce (Rawson et al., 2013, Cook et al., 2008, Adam et al., 2017). For courses with high numbers of participants, online learning has the potential to reduce costs through economies of scale. Online learning also has the potential to improve the financial viability of courses with few learners. KSH participants identified courses that were difficult to provide because too few SMW would enrol. A course that might only attract four or five people at any one time, might never be financially viable for face-to-face training, yet when placed online could eventually attract a large enough number of learners to make it cost-effective. Over time such courses could benefit from the economies of scale attractive to providers of Massive Open Online Courses (MOOCs)(Daradoumis et al., 2013, Hollands and Tirthali, 2014).

Online learning resources can ameliorate barriers of time and money, they can provide cost-effective and time-flexible resources. However, such characteristics may be insufficient if SMW have no time, or if providers have no available money; just because a resource is cost-effective does not make it affordable. In the context of reduced funding, the cost of designing optimised online learning resources may be beyond the budgets of services and provider organisations regardless of how cost effective they might be. Similarly, if SMW have too much work to complete training, even the shortest and most flexible of modules will remain out of reach.

The main facilitator of access to training in the present study was the support of service managers. They could provide funding, motivation and protected time for SMW to attend training (Rogers, 2003, Roche and Nicholas, 2016). These findings suggest that barriers of time and competing work priorities can be partially reduced if a service manager supports the training. The present study suggests that online learning must appeal to managers as well as to SMW. It is important to note that managers' motivations did not always align with those of SMW participant and were often driven by regulatory compliance (as described above). Online learning must appeal to the motivations of both SMW and service managers. The importance of organisational support has been explored in greater depth by Roche and colleagues and is also highlighted in Rogers's DOI (Baker and Roche, 2002, Rogers, 2003).

13.6.1 Changes in format and content to aid dissemination

When searching for information on the internet, many participants said that they struggled to interpret information and cited this as a barrier to learning. This implied that many existing online resources were not perceived to be usable or easy to use (Cooper et al., 2014, Venkatesh and Davis, 2000). Many participants said that academic language could be difficult to understand as previously highlighted by Campbell and colleagues (Campbell et al., 2003). For example, online resources that present a systematic review of a therapeutic intervention might not be easy for many SMW to read and implement, but resources such as structured groups, worksheets and simple summaries were perceived in the present study as easier to use and understand.

It is in this issue of presentation and format that the boundaries between what constitutes content and format become blurred. In the process of transferring a systematic review to a collection of easy-to-use resources for SMW it is both the format and content that are changed (Weingardt, 2004). When information about EBP is changed so that it is easier for SMW to use, there is a risk that the content of that intervention is also changed. Designers of online learning resources must assess changes to the content of interventions so that they are presented in a way that is attractive to

SMW, yet not make so many changes that the content is substantially different from the original source material; thus making it a different intervention from the one that was originally studied.

A further challenge to translating research outputs into training materials is that SMW often seek answers to questions that are not answered by research. Research often concerns complex methodologies, hypotheses, interpretations and suggestions which are designed for use by other researchers. As one KSH commented, research outputs are not designed for SMW with few GCSEs who seek guidance on how to best work with a chaotic service user. Online resources can potentially create a direct communication channel between researchers and SMW (Rogers, 2003) that can link researchers and practitioners through a medium that both understand (Bakker et al., 2009). Intermediary organisations or opinion leader organisations are commonly used to translate research and evidence into easy to understand resources (Rogers, 2003), yet participants noted that there were fewer such organisations in addiction treatment provision following reductions in funding. Drug and Alcohol Findings was alone in the present study in providing resources that translated research into practical information and was well used by KSH, but rarely by SMW participants. It is important to note that in the annual user survey published by Drug and Alcohol Findings, they report that many SMW use their website and enrol on their mailing list (Ashton and Davies, 2018). It is possible that DAF and other online resources were more commonly used than was reported here, but that they were accessed from links in an email or from a list of 'favourites' on a web browser and so their name was not recalled during data collection.

13.6.2 Online learning

The present study also identified several barriers to training that were specific to online learning resources. Many participants said that they did not like learning on computers, that they did not enjoy reading from a screen, that online learning did not meet 'activist' learning preferences and that computers are *'too cold and clinical'* to learn from. These perceptions helped to contextualise beliefs that online learning was best for information-based learning whilst skills-based learning required face-to-face contact; assertions not reflected in the academic literature (Cook et al., 2008). These perceptions act as a barrier to online learning for activists, and for those who do not like reading, perceptions that good design should seek to change. Rogers suggests that such attitudes can be changed through promoting and evaluating online resources, emphasising the need for more promotion and research in online learning (Rogers, 2003).

Finally, participants said that they would tolerate poor formatting and design if the content of online learning was useful, yet many also talked about being intolerant of online errors. Frustrating or slow

websites were simply not used as participants naturally gravitated towards efficient, simple and well-designed online resources. This finding relates to the importance placed in UCD of end-users being able to complete primary tasks without delay or frustration (Cooper et al., 2014). The TAM also emphasises this principle saying that users must perceive resources to be easy to use, and that this perceived ease of use predicts actual use (Davis, 1989). The best online learning resources may remain underused if they contain basic errors that frustrate users.

13.7 Objective 7: The motivation of substance misuse workers to access addiction education and training

The success of online learning resources often relies on how motivated people are to use them (Cooper et al., 2014, Nielsen, 1993). The present study sought to identify factors that motivate SMW to use online learning so that those factors could be used to optimise online learning resources.

13.7.1 Relevance of resources

A recurring finding in the present study was that the relevance of online learning resources was important to SMW participants. The importance placed on content relevance matches well with the models and theories described in Chapter 7. Relevance, or usefulness, is central to the TAM (Davis, 1985, Venkatesh and Davis, 2000) as well as central to UCD which talks about identifying the end-user's primary goals and needs, concluding that resources that are relevant to meeting these goals and needs will be successful (Cooper et al., 2014). It is also emphasised by Rogers's DOI, whereby innovation with a 'relative advantage' will be diffused quicker than those without (Rogers, 2003). The exception of administrative work, where participants were unmotivated to attend administrative training despite acknowledging its high relevance, highlights an important issue. It is not enough for online learning resources to be relevant to addiction treatment work, they must also be perceived to be relevant by SMW. As described above, the most relevant training courses were those that related to training in therapeutic skills or therapeutic relationship building.

Outside of formal training, the present study identified learning that happened in an informal and self-directed way by searching online resources. Often referred to as 'just in time' learning (Byrne-Davis et al., 2015), participants regularly used the internet to find information that met their or their service users' immediate needs or queries. In comparison to formal training modules, this type of learning was less determined by provider organisations and more defined by SMW needs and interests. Following the principles of UCD, online searches for information represent immediate and

time-limited primary tasks (Cooper et al., 2014). The exact queries for which participants sought answers tended to be detailed and specific in nature, yet the principle of searching for information is transferrable and broad. For example, a participant using the internet to find out what happens to an eye when vodka is applied to it, is not widely transferrable to other SMW. The observation that SMW turn to the internet to answer specific clinical queries as they arise is transferrable, and a common learning behaviour that is important to consider when designing high-quality online learning resources.

Designing online learning resources that meet these diverse, specific and unpredictable needs would be challenging. Many participants said they would value being able to search websites by using keywords to find information relevant to service users. Although they are not well used by SMW, online resources with these features do exist and include academic databases, university websites and specifically Drug and Alcohol Findings (Ashton and Davies, 2018). The latter contains large amounts of addiction treatment information that can be searched and filtered yet appeared to be rarely used by participants. The main problem experienced by participants when searching for information in this way, was that the results of internet searches were often difficult to read, understand, compare and implement. Accordingly, many online resources do not appear to efficiently and effectively meet the needs of SMW (Cooper et al., 2014).

The analyses here suggest that information sought by SMW is framed by collections of problems and their interactions, and that they struggle to find research that provides that information. For online learning resources to meet the information queries of SMW the nature of those queries would need to be identified, categorised and mapped against relevant research outputs. The design of such resources would require three research activities. First, identifying search terms used by SMW; second, a mapping exercise exploring how these terms relate to research outputs; and third, the translation of research outputs so that they are accessible for and usable by SMW. Such resources would build on the work of Bakker and colleagues who identified 'boundary objects' as resources or objects that aided communication between researchers and technicians in manufacturing processes (Bakker et al., 2009). Such objects are those that are designed for multiple stakeholders working on single projects and can include maps, manuals or technical drawings. Online learning resources following this principle would introduce a common language and taxonomy of information between researchers and SMW that, according to the data from the present study, is currently absent.

Traditionally, clinical guidelines have been used to summarise and transfer information from research and policy to practice, and can act as such boundary objects (Department of Health (England) and the devolved administrations, 2017). In the present study, clinical guidelines were

rarely used by SMW participants, with some considering them irrelevant to non-medical treatment delivery. This misperception of, and low value placed on, clinical guidelines could indicate a mental model among third-sector SMW whereby clinical guidelines and clinical work is not relevant for them (Cooper et al., 2014, Luty and Rao, 2008), a perception perhaps reinforced by the non-professional nature of third-sector SMW and their relationship with NHS services.

13.8 Objective 8: Substance misuse workers' access to and use of research and evidence-based practice

The implications of the TAM and of UCD on the present study appear to be relatively straightforward; if training is relevant and if it is perceived to be useful then it will be well used. It is in Rogers's concept of 'relative advantage' that questions about how to identify the most effective interventions arise (Rogers, 2003). On this subject the present study found little agreement among participants. The issue of compatibility as identified by Wong and colleagues' realist review is reflected here (Wong et al., 2010); their recommendation was to provide training in subjects that were compatible with SMW ideologies, a finding replicated by other studies (Ducharme et al., 2010, Sinclair et al., 2011, Bobo et al., 1995). Objections to treatments based on the beliefs of SMW were not identified in the present study. The present study identified efficacy and ease of use as important influences on intervention acceptability.

13.8.1 Therapeutic relationship

Perhaps the most demonstrative of the issues concerning the use of research and EBP resources is in the importance placed on the therapeutic relationship as described above. Many SMW and KSH participants thought that developing a good therapeutic relationship was the most important element of addiction treatment, a finding that relates well to empirical studies that have found the therapeutic alliance to predict retention of service users (Campbell et al., 2015, Meier et al., 2006, Lambert and Barley, 2001). Others have also noted the importance of a therapeutic alliance in providing effective addiction treatment (Meier et al., 2005), one using data from project MATCH to suggest that comparisons between treatments rarely result in significant differences in treatment outcomes, yet comparisons between clinicians do (Miller and Moyers, 2015), a finding echoed in statements made by some KSH in the present study. The therapeutic relationship was perceived to be central to addiction treatment therefore its inclusion in online training resources would ensure that the needs of SMW were met.

It is in the importance placed on the therapeutic relationship that the interaction between SMW and research findings is illuminated. Both KSH and SMW participants considered the therapeutic relationship to be of primary importance to treatment outcomes. Many did not think that those skills could be effectively learned through training. Many participants also said that, without a therapeutic relationship few further interventions could be effectively delivered. SMW participants also placed a high importance on being able to meet the needs of their service users through delivering flexible interventions. These two principles of treatment, the therapeutic relationship and responding to service user need, were both routinely considered more important than delivering EBP. For many, meeting regulatory requirements was also prioritised over delivery of EBP, either by themselves, by their managers or by regulatory organisations. That the CQC seemed to audit training based on locally identified needs yet did not specifically audit training on evidence-based interventions further illustrates the low priority placed on delivering EBP throughout addiction treatment services. Participants struggled to access and use information on research and EBP, but for most participants such information was of seen as less relevant to treatment delivery than unteachable relationship skills, responsiveness, and regulatory compliance. Online learning resources wishing to aid the dissemination of research and EBP must work to change perceptions about the relative importance of using EBP in the addiction treatment settings.

13.9 Objective 9: The technologies used by the substance misuse workforce to access the internet

13.9.1 Wide range of machines

The present study found that participants used a wide range of technology, that was of variable quality, to access the internet. Low quality technology has previously been identified as a barrier to diffusion because of its ability to influence the access and functionality of online learning resources (Lundgren et al., 2012, Hartzler et al., 2012). Cooper and colleagues suggest that delays in loading websites or pages within websites can cause end-users to become distracted. They suggest that delays over a second will be noticed and delays over ten seconds will cause the user's attention to switch to another subject. Whether these delays are because of resource design or technology will have little effect on their impact.

The difficulty that some participants had using old and slow computers are not limited to addiction treatment settings. Many healthcare settings, including NHS services, rely on old and slow technology (TrueBlueSky Social Enterprise Ltd, 2016). In the wider context of funding reductions (Advisory Council on the Misuse of Drugs (ACMD), 2017, HM Treasury, 2010, Recovery Partnership

and Adfam, 2017b), resources are unlikely to become available for SMW to be provided with high-end technology. Designers of online learning resources must accommodate these restrictions and design online learning resources that are easy to use on a range of computers and Smartphones. Technology can affect the ability of SMW to use animations, video, sound and to access large amounts of information at once. Garcia-Lopez and colleagues recommended that the content of online materials must be appropriate for all forms of technology used by participants (Garcia-Lopez et al., 2017). The process of usability testing involves end-users testing prototype resources in the context in which they will be used to ensure that proposed design features work when implemented (Nielsen, 1993, Cooper et al., 2014). The data here support the use of usability testing and emphasise its importance for this population to ensure that the technology used by SMW does not act as a barrier to online learning resources.

As well as using low quality technology, many participants did not have their own desk or computer, many 'hot-desked' and worked in busy offices with many distractions. Online learning resources must be designed so that distractions do not cause learners to lose progress, and that re-starting an online learning module does not rely on logging into the same computer (Lee and Sloan, 2015).

As with educational levels and digital literacy the temptation might be to design for a lowest common denominator; making all resources suitable for people using very old and slow computers and dial-up internet connections. However, such designs would be likely to be frustrating to those accessing online learning on new computers using superfast broadband. This again indicates the potential value of using accelerators to enable SMW to access multiple formats and options that can are appropriate for the context in which they will be used (Nielsen, 1994, Nielsen, 1993).

13.10 Objective 10: The types of internet resources commonly used by the substance misuse workforce

Much of the data referring to participants' use of the internet has been discussed above in relation to mandatory training and online searches for service user specific information. There were few additional and commonly used websites identified in the data here, most participants using organisational intranets or Google. This might be because few resources meet the needs of SMW but could also indicate that the needs of SMW are so diverse that no single resource can cater for them, as suggested by one participant. The two primary resources used by SMW highlight important online behaviours that designers of online learning resources must consider. Online learning resources must appear high up on a Google search in order to be used, a need recognised by many businesses,

with an estimated 71% of consumer choices being made from the first page of Google results, and just 6% from the second (Shelton, 2017). Online learning resources would also improve access if they were linked with organisational intranets, further emphasising the influence that organisational structures can have on training access.

A finding perhaps related the amount of administrative work completed by SMW was that participants spent a median of four hours every day using online resources; two hours at home and two at work. This relates to national averages of an estimated 24 hours per week (Ofcom, 2017), which does not account for variance of use on non-working days. The data do suggest that SMW use the internet to a similar extent as the general UK population.

An online resource commonly used by most participant was their organisation's online case management system. Here, as with skills audits through training and Google searches, is an opportunity to use information routinely provided by SMW to inform the personalisation of online learning resources. SMW routinely enter data about their service users on to case management systems. These data cover drug use, healthcare needs, referrals, treatment plans and risk assessments (Public Health England, 2017a, Public Health England, 2018). Participants also reported being motivated for learning by a desire to help their service users and to respond to their needs. There is an opportunity here to use the data provided by SMW to personalise access to learning resources that meets the needs of their immediate caseload. There were three commonly used online resources where SMW routinely enter information that could aid the design of online learning resources: during tests of online learning, when searching the internet using Google and when entering data on case management systems. The challenge to using the latter to inform the design of online learning resources would be to make those resources easy to use, compliant with data protection principles and to not make data entry tasks more difficult. Participants in the present study were often frustrated by the requirement to enter large amounts of data, the results of which were rarely reported to them. Online resources that used these data to support SMW could partially address this frustration whilst personalising and optimising online learning resources.

13.11 Objective 11: The confidence and competence of substance misuse workers in using internet technologies

13.11.1 Digital literacy

The digital literacy of SMW identified in the present study indicates a wide range of abilities among participants, some reporting very low digital literacy and others high levels of ability, all of which

must be accommodated if online learning resources are to be successful. The digital literacy reported in the present study is substantially higher than was found in the original development of the digital literacy tool used by Hargittai (Hargittai, 2005) However, the data used in the Hargittai study were from 2001 and 2002 and it is unsurprising that digital literacy has increased since then. Few other studies use the same tool on populations that bear any resemblance to participants in the present study; the benefits of comparing SMW in the present study with New Zealand accountants are minimal (Mohammadyari and Singh, 2015). Comparisons are further hindered by the lack of associations found in the present study. Digital literacy did not vary according to latent class subgroups or education. There was an association between digital literacy and online learning as a preference. The limitations of the present study (discussed below) are particularly important for this outcome. The self-selecting nature of participants along with the online setting of the survey is likely to have deterred SMW with low levels of digital literacy from participation. Despite this, their presence was identified in the interview data through participants who talked about colleagues who struggled with using online technology.

Previous studies have found that people with high levels of digital literacy are more likely to search for online resources (Dobransky and Hargittai, 2012) than people with low levels of digital literacy. One study found that digital literacy was a prerequisite for using blended learning (Tang and Chaw, 2016). It is unsurprising perhaps that people with better digital literacy have been shown to gain better outcomes from using online resources (Neter and Brainin, 2012). The implications of this are that online learning resources are likely to be more used by people with higher digital literacy, and that those SMW are also likely to learn more from such resources. Some studies have added some detail to this finding suggesting that the amount of effort required to complete online learning is more for people with low levels of digital literacy, making those resources perceived as difficult to use (Mohammadyari and Singh, 2015). This finding also reflects the principles of cognitive load theory (Young et al., 2014) whereby the effort it takes to use learning resources detracts from the effort that learners can dedicate to learning.

In addition to the technical aspects of using online resources, some studies suggest that high digital literacy can improve the ability of learners to identify, screen and interpret online information (Van Deursen, 2012). The importance of designing online resources that people with low levels of digital literacy can use, is emphasised by a study showing that consistent use of online resources, rather than education, was the most effective way to improve the digital literacy of learners (Eshet-Alkalai and Chajut, 2010). The more SMW use online resources, the more they learn to use online resources and the more they will benefit from them.

The digital literacy of those using online resources remains important. A literature review by Health Education England illustrated the difficulties that healthcare providers can have when using information technology on a broad workforce. They suggested that progress was hindered by the lack of agreement among UK health provision services about what constitutes digital literacy, and about how to best use digital resources (TrueBlueSky Social Enterprise Ltd, 2016). The report identified a large range of digital literacy skills in UK healthcare settings as well as missed opportunities for digital health technologies to help improve treatment delivery to patients. They also noted the lack of research literature on the digital literacy skills of non-qualified healthcare employees, a gap in the literature that this study hopes to address.

A further point of note about digital literacy is that many participants talked of the numerous data entry and management tasks they completed on a routine basis. One KSH said that SMW did not always fully understand the terms they were entering. In one US study, high digital literacy was positively associated with the accuracy of online data entry (Johnson et al., 2010). The implication here is that digital literacy skills can influence the accuracy of data entry and data management tasks. The accuracy of case-notes was raised in the present study as a factor that could influence treatment outcomes. Furthermore, data entered by SMW are used for commissioning, performance reports, and national statistics of addiction treatment (Public Health England, 2017a). If the digital literacy of SMW affects the accuracy of these data, then this narrow area of education is one worth addressing through well designed online learning resources.

13.12 Optimising the design of online learning resources

SMW are diverse in their demographic and educational needs and optimised online learning resources should accommodate these diverse needs through the use of accelerators and by enabling personalisation of online learning resources. Current SMW training is often driven by a need to meet regulatory compliance with few structural incentives for continual professional development. Participants saw themselves as therapeutic workers and were enthusiastic about attending training related to the delivery of therapeutic interventions. They also completed a lot of administrative tasks but were not enthusiastic about completing training on those tasks. There remain doubts about the importance of evidence-based therapeutic interventions with many perceiving good communication skills and the ability to develop a therapeutic relationship to be the most important factors in addiction treatment delivery. This perception combined with the lack of structural incentives for continuous professional development means that training in therapeutic skills is often only

prioritised when it meets regulatory requirements. Despite this, the commitment of SMW and KSH means that there remains motivation for training and routine training in therapeutic skills.

Online learning can reduce the barriers to face-to-face training but is often basic and information based with many SMW and KSH uncertain about whether online learning can be used for skills development. There are opportunities for online learning resources to meet the needs of SMW who search the internet regularly for queries that arise through working with service users.

The data, analyses and discussion presented here have been condensed into the following recommendations for the content and format of online learning resources. Designers can use these recommendations to ensure that online learning resources are optimised to meet needs and preferences of the SMW working for third-sector organisations providing addiction treatment services in England (Table 59 and Table 60).

Table 59: Optimising online learning: Content checklist

Content

Item	Description
Does the online learning focus on therapeutic skills?	Online learning resources must align with the mental model of SMW. Training should appeal to SMW motivation to develop therapeutic intervention skills. This will ensure that training is seen as relevant
Does the online learning contain hidden administrative skills training?	SMW are reluctant to complete administrative training but providing tips and guidance on relevant administrative tasks will meet their need for improved administrative skills
Does the online learning meet regulatory requirements?	Training that meets regulatory requirements will be supported by structural drivers for regulatory compliance and will be more likely to be supported by managers and treatment provider organisations
Does the online learning acknowledge recommissioning as a contextual factor?	Most SMW have experienced recommissioning, therefore training that refers to this process will be seen as contextually relevant
Does the online learning provide support for SMW on recommissioning and TUPE processes?	Staff experience high levels of stress from recommissioning and have a need for support through this process. Training that meets this need will be perceived to be useful
Does the online learning cover training in therapeutic relationship skills?	SMW are interested in the therapeutic relationship and consider it central to treatment delivery, but training is rarely provided
Does the online learning demonstrate that skills learned will contribute to service user outcomes?	There is uncertainty in addiction treatment services about the value of providing evidence-based therapeutic interventions. All training should seek to address these perceptions to improve motivation for training in all therapeutic subjects
Does the online learning align with the mental model that online learning is for knowledge-based subjects?	Online learning designed to develop a learner's skills is likely to be viewed sceptically whereas the efficacy of information-based courses is more accepted. Skills training should be included in online resources but should not form the main emphasis of the content
Does the online learning contain advanced content for subject matter experts?	Training in advanced subjects should encourage SMW to disseminate learning amongst their colleagues. This will capitalise on existing social learning networks in addiction treatment services
Does the online learning contain structures for continual updates of content as training needs change?	The training needs of SMW are likely to change over time, as are the technologies used and the perceptions of online learning. Continual assessment should identify these changes and adapt provision accordingly
Does the online learning explain how easy and flexible the intervention is to learn and to deliver?	Perceptions that interventions are too complex to learn and deliver can deter SMW from completing training on them and from using them in practice
Does the online learning contain elements that will teach SMW about the importance and usefulness of incorporating research and evidence-based practice in to routine addiction treatment	SMW often place a low importance on research and evidence-based practice. Online learning resources that seek to address this low priority can help improve SMW engagement with continuous professional development and can increase the motivation for training

SMW = Substance misuse workers

Table 60: Optimising online learning: Format checklist

Format

Item	Description
Does the online learning use accelerators to accommodate different levels of education?	Advanced and complex content must be provided for people with of all educational characteristics, but SMW must be able to access features appropriate to their level of education and learning preferences
Is the online learning auditable by SMW managers?	Managers and organisations need to be able to demonstrate completion of training. Completion reports must be available to encourage the support of managers
Does the online learning use a formative assessment to enable personalisation of content?	End of unit tests are currently used as a form of audit. A formative evaluation of training needs and preferences should be used to direct SMW to personalised training subjects and styles that will best meet their needs
Does the online learning provide resources designed for sharing to aid post-training dissemination?	Accompanying resources such as worksheets, groupwork plans or team meeting exercises should be provided to encourage information sharing among teams
Can the user save progress throughout?	SMW must be able to complete online learning in busy work places that are subject to disruption. Courses must be easily paused and resumed on different computers if necessary
Does the online learning include resources for use away from the computer?	Resources to encourage learning to continue away from the internet will help learners who do not like learning in front of computers. Groupwork plans and worksheets would help this
Has the online learning been tested for errors?	Prototypes must be thoroughly tested for errors. Errors will deter use
Have designers conducted a mapping exercise to match SMW queries with research outputs?	Search functions should be developed that match the clinical queries of SMW to the research base
Has the online learning been tested on slow computers?	Prototypes must be tested for errors or incompatibility with the technologies used by many SMW
Does the online learning appear on page one of a Google search?	Online learning resources must appear high on Google search pages to be found and well used by SMW
Does the online learning link to provider organisational intranets?	Online learning resources that link with provider organisations intranets are more likely to be found

13.13 Further issues raised by the research

13.13.1 Recommissioning

The issues faced by SMW and addiction treatment provider organisations that were associated with recommissioning processes and budget restrictions were present throughout the research. Recommissioning was cited as the cause of stress, grief, of people leaving the workforce and of chaotic service provision with few benefits identified in the data here. It must however be noted that the present study did not seek to identify any such benefits. The requirements, processes and political rationales for reductions in spending on social care are neither the focus, nor interest of this research. However, the impact of those funding reductions and recommissioning processes on addiction treatment appear to be substantial and understudied.

Reductions in funding were related to increased workloads in the present study, yet it was the process of recommissioning rather than reduced funding that drew the most criticism from participants. Studies of social care workforces have found that high workloads, management difficulties, and workplace tension were related to burnout (Farmer, 1995, Oyefeso and Clancy, 2009) and that burnout and stress can reduce treatment outcomes (Hall et al., 2016). High workloads, management difficulties and tension were all highlighted in the present study as consequences of recommissioning processes. These processes were reported to be the cause of stress and disruption for up to two years out of what were often three-year treatment delivery contracts. Disruption prior to recommissioning was typified by anxiety among SMW participants about job security, with further disruption continuing during the transfer of services as participants were transferred from old to new employers under Transfer of Undertakings - Protection of Employment (TUPE) (HM Government, 1981). Disruption then continued as new service designs were implemented. Many participants said that implementation problems could extend throughout the year after recommissioning. Several previous studies have identified high staff turnover as a barrier to implementation (Condon et al., 2008, Amodeo et al., 2011), yet staff turnover between organisations seemed to be a common experience among participants and a direct result of recommissioning. Commentators have previously warned of disruption and of compromised treatment outcomes from recommissioning processes (Advisory Council on the Misuse of Drugs (ACMD), 2017, Drummond, 2017) and data from the present study help to illustrate the impact of recommissioning from the perceptions of SMW.

13.13.2 Treatment fidelity

The present study identified that evidence-based treatments were rarely delivered to high fidelity and were often partially delivered or amended to suit the needs of SMW and service users. Many participants valued flexible interventions and would isolate small elements of interventions to use according to need. Data from the present study reflected findings from previous studies about SMW reluctance to use manualised treatments (Autrique et al., 2009, Rieckmann et al., 2011a). Whether an intervention is delivered with high or low fidelity can influence the outcomes from that intervention as identified by reports of suboptimal methadone prescribing and psychosocial treatments (Strang et al., 2010, Advisory Council on the Misuse of Drugs (ACMD), 2015, Carroll, 2014, Best et al., 2009). The present study suggests that low fidelity delivery of EBP in third-sector addiction treatment is the norm rather than the exception. The impact of reduced fidelity on an intervention's outcomes is an important research topic when low fidelity delivery is highly likely. It is important to know whether outcomes quickly reduce when a treatment is delivered with low fidelity, or whether outcomes persist as fidelity drops. New medications must undertake stability tests to identify the effect that poor storage or improper use can have on their efficacy (World Health Organisation, 1994). Similar tests on the stability of psychosocial interventions when delivered with low fidelity are not commonplace but could add value to research on the implementation of evidence-based psychosocial interventions in addiction treatment settings.

The opportunity for designers of online learning is to provide information for SMW about the most effective treatments based on a SMW ability (or inability) to deliver those treatments with high fidelity. A SMW working in outreach settings with small and fleeting chances to interact with service users might be best equipped with highly flexible interventions that could be delivered in small and uncontrolled settings. A group worker providing a series of group sessions might be better placed to deliver treatments requiring high fidelity. In order to provide this kind of personalised recommendation for training and treatment interventions based on working context, research must identify the effects of reduced fidelity on evidence-based interventions.

13.13.3 Administrative work

Many routine tasks completed by SMW do not involve therapeutic work with service users but still contribute to treatment outcomes. An administrator may complete, check and send treatment referrals that ensure service users receive appropriate care for a wide range of health issues (Department of Health (England) and the devolved administrations, 2017). The extent to which those and other administrative tasks contribute to treatment outcomes is rarely studied. For a

therapeutic intervention to be recommended by the National Institute for Health and Care Excellence (NICE) there must be robust evidence of its effectiveness in double-blind randomised controlled trials and similar evidence that it will cause no harm (National Institute for Health and Care Excellence (NICE), 2013, Pilling et al., 2009). Yet the same burden of proof is not required for administrative tasks such as writing case notes, data entry, information governance procedures, referral routes and attendance at training.

The two sets of work (therapeutic and administrative) are often viewed separately yet are both completed by SMW and both contribute to addiction treatment outcomes. Administrative tasks take time to complete; time that, according to the present study and previous studies, can be at the expense of time spent delivering therapeutic interventions (Best et al., 2009). Each administrative activity diminishes the time available to deliver therapeutic interventions, raising an important question about the extent to which non-therapeutic tasks contribute to service user outcomes. Administrative tasks that do contribute to service user outcomes should be studied, optimised and designed to maximise their contribution. Administrative tasks that do not contribute to service user outcomes, should also be studied to examine how their impact on SMW ability to deliver therapeutic interventions can be minimised whilst still meeting regulatory requirements. Whether administrative tasks do or do not contribute to treatment outcomes, their optimisation has the potential to improve outcomes for service users, either directly through optimised provision, or indirectly by minimising their impact on those tasks that do.

All tasks completed by SMW have the potential to contribute, by action or omission, towards service user outcomes. Within this range of activities, it seems to be only psychological interventions that are subject to the substantial rigours of scientific research. Treatment outcomes are not solely dependent on medicinal, psychosocial or recovery interventions. Researchers must ask what else happens in addiction treatment services, how it contributes to outcomes for service users and how it interacts with other interventions. Research methods such as Realist Evaluation would enable researchers to further explore the complexity of addiction treatment provision and to identify how administrative and other non-therapeutic tasks contribute to treatment outcomes (Pawson et al., 1997).

13.14 Strengths and limitations

There are many strengths and limitations to the present study. The research provides an in-depth mixed-methods analyses of an understudied population who are integral to the delivery of addiction treatment services. The study also produces data that can be of direct practical use to those

designing online learning resources to support this population. The sample size, the self-selecting nature of the sample and lack of a sampling frame all limit the generalisability of the findings.

13.14.1 Strengths

The primary strength of the present study is that it focuses on an understudied population in a way that enables hypothesis generation. The design of the study enabled data to be collected on specific training needs, as well as data of sufficient depth to identify broad issues about the wider working contexts of SMW. The mixed-methods research design allowed the analyses to combine qualitative and quantitative methods to identify details, perceptions, comparative preferences and the relative importance of training subjects. Furthermore, the convergent mixed methods design meant that those types of data could be compared to analyse agreements and differences in responses.

Future research can build on these findings and, due to the convergent mixed methods approach, can seek to add detail to findings from the quantitative survey and to test findings from the qualitative findings on a large sample. The present study was largely exploratory and has succeeded in identifying several factors that are important to the design of online learning resources for SMW.

The inclusion of KSH is a strength. This third source of data provided the ability to check the perceptions of SMW participants against a separate but closely related group of participants. It also allowed a range of issues to be contextualised in a way that would have been impossible without their data. For example, the value of being able to audit completion of online learning adds vital information that would have been absent without the inclusion of KSH. Whilst organisational factors are worth investigation in their own right they were not the intended focus here and so their omission could have been justified. Their addition adds value to the findings presented here.

The approach was novel in that it sought to identify the needs of SMW from their own perspectives. The interview data allowed SMW to discuss their work, career, personal and other training needs without selecting from a predefined list. The information here can therefore generate hypotheses about the nature of training needs that were not defined by the needs or preferences of people other than SMW participants. Similarly, the research identified barriers and facilitators to training that were identified by SMW participants themselves enabling contemporary issues as yet unidentified in the literature to be identified.

The number of the qualitative sample is a strength. Nielsen suggested that interviewing 20 end-users was sufficient for a qualitative study for UCD purposes (Nielsen, 1993), therefore the inclusion of 31

SMW interviews and 14 KSH interviews provided rich data for optimising the design of online learning resources.

13.14.2 Limitations

The demographic characteristics, digital literacy and time working in the sector of survey and interview participants were similar, therefore limitations arising from these characteristics will be discussed for both survey and interview participants together.

The low response rate of the SMW survey limits the generalisability of the findings presented here. The main barrier to generalisability, however, is the lack of an available sampling frame for third-sector SMW. It was not possible therefore to estimate the proportion of SMW who completed the online survey, nor was it possible to determine whether any characteristics were over-represented in the data. The demographic characteristics were similar to those reported in other studies of UK SMW, but the studies vary in design and sampling strategy limiting the ability to draw conclusions from these similarities.

There was a further source of bias in the online survey recruitment methods. Participants were self-selecting and recruited online by email. These factors introduced a bias towards those workers with good internet access, an interest in research and with spare time to complete an online survey. Accordingly, not only are the data non-representative but they also introduce bias that excluded the perceptions of people with low access to and motivation for using online resources. This limitation does not excessively diminish the quality of the research. Participants completing the survey were likely to be those interested in using online resources and therefore the sample were biased towards those 'early adopters' that Rogers suggests would be the first to use online learning resources (Rogers, 2003). Furthermore, perspectives relating to SMW with low digital literacy were provided in the interviews data when participants talked about their colleagues.

Another source of bias in the sample was that a large proportion of participants (70%) were recruited from a single participating organisation (here referred to as 'Treat2'). This has the potential to bias results towards the needs, working cultures and practices of Treat2 and not those of SMW in general. However, many participants had worked for multiple addiction treatment organisations, therefore their needs and working characteristics would not be not solely defined by their current employer but influenced by their experiences with several organisations; indeed, this influence was evident in several interviews where participants talked about their experiences in previous jobs. Further, many qualitative items encouraged participants to identify needs that related to addiction

treatment in general rather than to their specific working contexts. For example, questions about the skills most important for an imagined new member of staff directed participants towards considering general, rather than context specific skills. Although these factors limit the impact that this source of bias has on the study, it remains an important consideration when discussing the transferability of any findings.

The size of the quantitative sample is a limitation. However, in the absence of a sampling frame a larger sample size would also not have provided representative findings. The sample, whilst small, is sufficient to generate hypotheses and produce indicative correlations. It meets the aims and objectives of the research and so again, the limitations of the sample size do not excessively diminish the quality of the research. It is also the largest research sample of SMW since the NTA training needs analysis in 2003 (Mills et al., 2003).

The findings may be limited to the five organisations that were recruited. Contexts and preferences of SMW in other organisations may be very different from those presented in the data here. This limitation is also modest; participants' experiences often included experiences working for a range of organisations. Six in ten participants had changed organisations through recommissioning processes and so the working experiences presented here include experiences working in organisations that were not recruited.

KSH were also not representative and were not recruited to be so. Therefore, findings drawn from those interviews are prone to bias and of limited generalisability. They do however provide valuable contexts and perspectives against which SMW data can be tested and compared.

14 Conclusions

14.1 Implications for research

The research here has raised many questions about substance misuse workers (SMW), about online learning and about addiction treatment provision. Many of these questions require further research; the recommendations for research and policy raised by the present study are described here.

Following the principles of User-Centred Design (UCD), the hypotheses generated here should next be tested on prototype online learning modules (Cooper et al., 2014). Research should then test whether those prototypes meet the needs and preferences of SMW. Such research would also enable investigation into the contribution that end-user research can have on the design of online learning resources. The present study conducted a formative assessment and as such represents the first stage in a process of optimising online learning resources for SMW.

In the process of designing and delivering online learning for SMW, there are many opportunities for research. The use of web use analytics enables researchers to explore the impact of subtle changes in the format or content of online learning resources. Research that explores the effectiveness of 'just in time' learning would be beneficial. A study of search terms used by SMW to search for information would enable the queries of SMW to be mapped against research outputs to explore ways in which treatment-based research can meet the needs of SMW.

To expand on the current literature on online learning for SMW, the impact of online learning resources on treatment outcomes should be studied. The data provided in the present study can help designers optimise the quality of online learning resources, but there is little merit in further research exploring increases in SMW skills and knowledge following training. Future research must report service user outcomes if it is to develop the evidence base relating to this subject.

Research related to the working contexts of SMW would aid development in SMW training and addiction treatment provision. Research to explore the benefits of and disruption from recommissioning processes should be prioritised. The research here identifies recommissioning as one of the largest disruptive factors in current addiction treatment provision, yet little is known about the effect it has on SMW, treatment delivery and service user outcomes. Research should also explore the impact of administrative tasks on treatment outcomes All actions that occur within addiction treatment affect treatment outcomes through their contribution to service user treatment, or through their impact on the ability of SMW to deliver therapeutic interventions. The

nature and importance of these tasks should be studied so that the impact of incremental changes in service delivery can be considered against their potential impacts on other activities.

Research that identifies the impact of reduced fidelity on treatment outcomes for a range of therapeutic interventions would enable SMW to select interventions according to their ability to deliver them to high or low fidelity. The data in the present study suggest that reduced fidelity of evidence-based interventions is likely, yet there is little research on the impact that fidelity has on treatment outcomes. Similarly, the impact of therapeutic relationship skills on intervention effectiveness and treatment outcomes would provide evidence to explore common assumptions made by SMW and KSH about the efficacy of therapeutic interventions when delivered by SMW with strong or weak therapeutic relationship skills.

Finally, routine staff training in a selection of EBPs should be mandated by either Public Health England (PHE) or the Care Quality Commission (CQC). These two organisations seem to have the ability to mandate sector wide change. Without this structural support, regulatory compliance will remain an administrative task with little focus on the therapeutic quality of addiction treatment. A requirement for annual training in (for example) Contingency Management (CM) or naloxone distribution could hasten the rate and accuracy with which those interventions are delivered, disseminated and diffused.

14.2 Conclusions

This is the first study in England to conduct user-focused research on third-sector SMW that has analysed the characteristics, working contexts, needs, motivations, and use of technology relevant to SMW training. In doing so it has identified training needs and contextual opportunities that can aid the design of online learning resources. It has also raised important questions about the characteristics of SMW, about the perceived importance of skills and about interactions between research and addiction treatment delivery. The data presented here suggest that there is a lack of clarity among SMW about which skills are most important for optimising treatment provision. Instead, there are a range of disparate ideas about the characteristics of highly effective SMW, few of which are based on robust or reliable evidence. There persists confusion about the relative value of communication skills and therapeutic interventions, about whether therapeutic relationship skills can be trained, about whether an evidence-based intervention is still evidence-based when delivered with low fidelity and about the characteristics that make some SMW naturally ‘good’ at their job.

The data indicate a workforce that is largely unable to find or use research to inform addiction treatment provision. Online learning has the potential to create a direct link between researchers and SMW. If those resources were interactive, they could be used to gain continual feedback from SMW so that researchers could continually assess and identify needs, preferences, questions and queries produced by SMW. The most important factor for realising this potential is that those resources must be well used. In order to be well used, they must be of high-quality, and they must be optimised for SMW. The data here present numerous ways to optimise online learning for SMW and these were summarised in Table 59 and Table 60. The broader conclusions are summarised here.

Online learning resources are, by their nature, easy to access for those with a computer or Smartphone and an internet connection. This flexibility means that they can be completed at convenient times and locations and can benefit from economies of scale, thus reducing costs or increasing training capacity. That online learning resources can help reduce these barriers is fundamental to their advantage, yet the benefits of flexible and accessible training are not specific to SMW and have already been highlighted by several systematic reviews on the subject (Jackson et al., 2018, Wong, 2012, Cook et al., 2008, Calder et al., 2017). The present study focuses on how to optimise online learning for third-sector SMW. It reports what they would consider to be important, and why.

The heterogeneity of SMW means that personalised approaches would be an essential element to the design of online learning resources. This approach involves allowing users to select content that is appropriate for their needs, education, and working contexts. Personalisation poses challenges for researchers and would mean that manualised therapeutic treatments would need to be translated into several different formats to meet the needs of different SMW. Whilst this may aid dissemination to a diverse population, it would risk introducing multiple changes to those treatments. Fidelity of dissemination would therefore become compromised in order to encourage wide implementation. Low fidelity of treatment delivery is, however, already commonplace in addiction treatment settings; participants use isolated worksheets, groupwork session plans and exercises from treatment manuals with little commitment to delivering them with fidelity. It is incumbent on researchers to explore the loss of outcomes caused by compromised fidelity of treatment. The evidence presented here indicate that SMW will deliver with the fidelity that suits them, an approach unlikely to be influenced by manualised instructions or the wishes of researchers.

14.2.1 Regulations and commissioning

Regulatory pressures in addiction treatment were evident throughout the interview data. The influence of regulatory compliance has, in many ways, improved the provision of online learning resources for SMW through regulation-driven mandatory training. Such training ensures that the needs of organisations and regulators are met but often does little to improve the knowledge, skills or abilities of SMW. Quality treatment provision (as opposed to regulatory compliance) seems to rely on the benevolence and commitment of SMW and KSH, perhaps reflecting the philanthropic traditions of third-sector organisations (Macmillan, 2010). It is encouraging that commitment to high quality treatment provision is evident here, but that high quality therapeutic service provision relies on this benevolence and is not supported by structural factors gives cause for concern.

Reductions in funding through recommissioning have reduced the capacity for addiction treatment providers to develop and provide training. The considerable disruption experienced through recommissioning processes seems to repeatedly disrupt the ability of SMW to work therapeutically with service users. Whilst online learning can acknowledge recommissioning as a common working context and provide support for SMW going through Transfer of Employment – Protection of Earnings (TUPE), it can do little to change the disruption from these processes. Gains from improved training are likely to remain marginal compared to the disruption reported in the present study from recommissioning.

14.2.2 Mental models

There were three important assumptions, or mental models, that were identified through analysis of the data here. The first was that SMW have a primarily therapeutic role, the second was that that online learning is ineffective for skills-based subjects, and the third that personal characteristics rather than skills learned through training were most important for treatment outcomes.

The impact of the mental model of the therapeutic role is that SMW participants are reluctant to engage in administrative skills training. The analysis here suggests that those tasks are an integral part of the work of SMW, and that their optimisation through training could improve treatment outcomes. This mental model is matched by comparable focus of research on therapeutic skills over administrative tasks when assessing activities that can influence treatment outcomes

The mental model that online learning is only effective for information-based subjects persists despite the existence of robust evidence to contradict this assumption (Cook et al., 2008). Most current online learning provision for SMW appears to remain information-based. The predominance

of information based online learning typified by reading slides has helped to perpetuate the view that online learning is an administrative exercise rather than a training opportunity. The possibilities of online experiences are numerous. Within behavioural sciences there is research in simulation training, the use of virtual reality and the 'internet of things' where online resources are linked to objects such as fitness trackers and heating systems (Gershenfeld et al., 2004). The internet has influenced art, politics, socialising and is a ubiquitous presence in 2018 (Farrell, 2012, Ofcom, 2017). The assumption that it is best used when displaying text in a series of slides seems somewhat unadventurous. However, online learning must align with this mental model and offer information-based learning resources for SMW whilst including elements of skills development and reflective practice that can help to challenge and change those assumptions over time.

The third mental model suggested that the personal characteristics of SMW are perceived to be more important to treatment outcomes than skills developed through training. The low quantity of research that focuses on third-sector SMW, on their training and on associated treatment outcomes, mean that there is little evidence to support or refute such assumptions. To design optimised online learning resources for SMW there must be some agreement among public health bodies and researchers about the behaviours, characteristics, knowledge, and skills that contribute most to treatment outcomes. There remains a great deal of ambivalence among SMW and key stakeholders (KSH), as well as a lack of empirical evidence relating to these factors. Therefore, efforts to optimise online learning are restricted by a lack of agreement about how to optimise the effectiveness of addiction treatment provision.

14.3 Summary

This thesis has explored the opportunities of online learning resources from the perspective of SMW. In doing so it has identified a range of ways to optimise the design of online learning resources for them. It has also identified several structural factors that influence addiction treatment delivery as well as concerns about the relevance and use of research and EBP by SMW.

Traditional approaches to diffusion imply that what is known to work sits with innovators and researchers, and that systems must enable this knowledge to transfer to practitioners so that it can be absorbed into routine practice. The data here identify that SMW have many treatment related needs that remain unmet by policy bodies, provider organisations, regulators, and research. Rather than focus entirely on how to ensure knowledge from research settings is sent to and accepted by SMW, there appears to be merit in identifying how research can best meet their identified needs. The first step in this process is to identify those needs, which this thesis has done. By asking them.

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16 Appendixes

16.1 Appendix I: Online survey for substance misuse worker participants

"Online training: The needs of substance misuse staff"

16.1.1 Welcome (Page 1)

This study from King's College London is designed to identify factors relevant to online education for the English substance misuse workforce. There is also an optional page that looks at knowledge of hepatitis treatment. The survey contains 26 short questions (plus 7 optional questions about hepatitis knowledge) and will take about 15 minutes to complete. Information that you provide will be kept anonymous and individual answers will not be shared with your employer. If you have not already received an information sheet containing details about this research, you can access a copy by clicking this link:

(Link to information sheet)

Please note that submission of a completed questionnaire implies consent to participate. This includes consent to processing your personal information for the purposes explained in the information sheet. This is on the understanding that all such information will be treated in accordance with the terms of the UK Data Protection Act 1998

Thank you for taking time to complete this survey.

At a later date we hope to interview substance misuse workers about training

needs, work experiences, and internet use. If you consent to be approached for

an interview please select 'yes'. If you do not wish to be approached for an interview, please select 'no'.

- No - Please do not contact me about taking part in an interview
- Yes - I consent to being contacted about taking part in an interview

If you selected Yes, please enter your e-mail address here (Please enter a valid email address.)

16.1.2 Demographic characteristics (Page 2)

1) What is your age in years?

- 16-20
- 21-30
- 31-40
- 41-50
- 51-65
- 65+

2) At birth, were you described as...

- Male
- Female
- Intersex
- I prefer not to say

3) What is your ethnic group? Choose one option that best describes your ethnic group or background.

- White: British
- White: Irish
- White: Any other White background
- Mixed: White and Black Caribbean
- Mixed: White and Black African
- Mixed: White and Asian
- Mixed: Any other mixed background
- Asian / Asian British: Indian
- Asian / Asian British: Pakistani
- Asian / Asian British: Bangladeshi
- Asian / Asian British: Any other Asian Background
- Black / Black British: Caribbean
- Black / Black British: African

- Black / Black British: Any other Black background
- Chinese
- Any other ethnic background

3a) If you have selected "other", please use this space to describe *(freetext)*

4) Which of the following best describes your level of formal education?

- No qualification
- GCSEs grades A*-C or equivalent
- A Level or equivalent
- Diploma or equivalent
- Degree or equivalent
- Post graduate degree or equivalent
- Other qualifications
- Don't know

5) Do you have any qualifications that relate to addiction work? (e.g. NVQ in health and social care, counselling etc.)

- No
- Yes

16.1.3 Your Work (Page 3)

6) To the nearest year, how long have you worked in substance misuse treatment services? *(freetext)*

7) To the nearest year, how long have you worked in your current job? *(freetext)*

8) Have you ever worked in a service that has been re-commissioned or been subject to TUPE? (Transfer under protection of earnings)

- Yes
- No
- Don't know

If yes, how many times? *(freetext)*

9) Which of the following do you provide as part of your role? (tick all that apply)

- Prescribing medication
- Motivational interventions (e.g. motivational interviewing and motivational enhancement therapy)
- Contingency Management (using a system of reinforcement or incentives to motivate behaviour change)
- Family and social network interventions (e.g. social behaviour and network therapy (SBNT), community reinforcement approach (CRA), behavioural couples therapy (BCT) & formal family therapy)
- Cognitive and behavioural based relapse prevention interventions (e.g. CBT based relapse prevention)
- Psychological interventions for co-existing mental health problems (as registered with a relevant professional / regulatory body)
- Psychodynamic therapies (as registered with a relevant professional / regulatory body)
- 12-step work
- Counselling – BACP accredited
- Peer support involvement
- Facilitated access to Mutual Aid
- Family support
- Parenting
- Housing support
- Employment support
- Education and training support
- Supported work projects (such as referral to a supported, paid employment service)
- Recovery check-ups (checking up on recovery progress, lapses and need for further signposting)
- Complementary therapies
- Other

If you selected Other, please specify: *(freetext)*

10) Do you manage a caseload?

- No - I do not manage a caseload
- Yes

If yes, approximately how many people are on your caseload? *(freetext)*

16.1.4 Current training needs (Page 4)

11) Do you plan to undertake any study or training related to your job in the next 12 months?

(please include study you may have already started)

- No
- Yes

If yes, please specify:

12) In the next two years, are there any areas related to your job where you would like to gain skills or knowledge? (e.g. in relation to specific therapies, complex needs clients, co-morbidity, management, clinical supervision)

- No
- Yes

If yes, please provide details

13) What learning methods do you prefer to gain the skills and knowledge you need? (tick all that apply)

- External training courses
- Internal training courses
- Working along more experienced colleagues
- Open and flexible learning programmes (e.g. videos, books, CD-ROMs etc.)
- Online learning (e-learning, virtual classrooms, webinars, MOOCs, social networking etc.)
- Mentoring
- Action learning (groups working to solve specific problems)
- Job rotations and secondments
- Project work (working on a specific project with defined objectives)
- Attendance at conferences or seminars
- Other

If you selected Other, please specify

14) Over the next two years, do you intend to do any of the following? (tick all that apply)

- Stay in current position
- Seek a promotion within your current organisation
- Seek a different position in your current organisation
- Seek a position in another voluntary / third sector substance misuse organisation
- Seek a position in an NHS substance misuse service
- Leave the substance misuse sector
- Undertake full time study
- Take maternity leave
- Retire
- Other

If you selected Other, please specify:

15) What was the last piece of work related training that you attended? *(freetext)*

On a scale of 1-10 how would you rate the quality of this training?

- N/A

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

16) Have you been able to use the knowledge and skills from your last piece of training in your current job?

- Yes
- No
- N/A

16.1.5 Current training needs (page 5)

17) Using the following scale, please indicate your interest in participating in any kind of training activity (including face-to-face and online) in each of the following areas:

	1 No interest	2 Very little interest	3 Moderate interest	4 Considerable interest	5 Maximum interest
Theories and concepts					
Models and formulations					
Detoxification					
Assessment techniques					
Treatment process activities					
Intervention techniques					

Interpersonal therapeutic skills					
Specific therapeutic activity					
Administrative skills					
Advanced clinical techniques					
Dual Diagnosis					
Special populations					

18) If you have been previously unable to attend training in the past, please indicate how much you agree with the following statements about what prevented you from accessing training:

	-2 Completely disagree	-1 Somewhat disagree	0 Uncertain	1 Somewhat agree	2 Completely agree
I did not know what training I needed					
I had no interest in participating in training					
I have completed all the training my work requires					
There are inadequate financial resources					
I lacked information about training					

programme availability					
The locations of training activities were inconvenient					
Previous training experiences were a waste of time					
I have too many other time commitments					
I have too many other work-related commitments					
The type of training that interested me was not available					

16.1.6 Access to technology (Page 6)

19) Which of the following do you use on a regular basis? (tick all that apply)

- Laptop
- Netbook
- Smart-phone
- Tablet
- Desktop Computer
- Games Console (connected to TV)
- Smart TV
- e-book Reader
- Portable Media Player
- Portable Games player
- Wearable Tech
- I use none of these on a regular basis

20) Please list up to three websites that you regularly access.

21) Please list up to three substance-misuse related websites that you regularly access.

22) Which of the following best describes your access to the internet at work?

- I have my own computer with full internet access
- I share my desk / computer with other staff (hotdesking)
- I have access to the internet, but the connection is slow and /or unreliable
- I have partial access to the internet (sites are restricted / no sound / no videos)
- I have no access to a computer or the internet at work

23) Please add any further information about your access to the internet and / or computers at work.

24) How many hours in a typical day do you use the internet at your workplace?

25) On a typical work day how many hours do you use the internet at home (for any reason including personal or work reasons)?

26) How familiar are you with the following computer and internet-related terms? Please choose a number between 1 and 5 where 1 represents "no understanding" and 5 represents "full understanding" of the item.

	No understanding	Little	Some	Good	Full
Favourites					
Bookmark					
Advanced search					
Firewall					
JPG					
PDF					
Preferences setting					

Spyware					
Weblog					
Newsgroup					
Wiki					
Podcasting					
Phishing					
Malware					
RSS					

27) How much training of any kind (including face-to-face and online) have you had on the following topics?

	No training	Some training (but would like more)	Sufficient training	N/A (not relevant or not wanted etc)
Hepatitis				
Domestic abuse				
Education training and employment				
Novel psychoactive substances				
Psycho-stimulants (such as methamphetamine)				
Naloxone for overdose prevention				
Behavioural couples' therapies				

Contingency management				

16.2 Appendix II: Interview topic guide for substance misuse worker participants

National Addiction Centre

Addictions Department

Institute of Psychiatry, Psychology and Neuroscience (IoPPN)

King's College London

Addictions Sciences Building

4 Windsor Walk

Denmark Hill

London SE5 8BB

Study 1 Topic Guide: Substance Misuse Workers

This guide is to be used by the researcher as a flexible guide for the interview. The questions will be used conversationally and short questions such as "why?" are included as a prompt for the interviewer.

Record:

- Location
- Date and time
- Gender
- Participant ID

Introduction:

- Thank you for taking the time to speak to me for this interview. It will take approximately 45 minutes to complete, but you can stop at any time you want.
- There are no right or wrong answers. I am just interested in your thoughts and opinions. If you do not want to answer a question, you do not have to and we can move on. Anything you say will be kept completely confidential. If we do use any of your words when we write up the study, we will make sure you cannot be identified.

Housekeeping points:

- I am going to record the interview because it is too difficult for me to listen and write everything down at the same time. This is standard when we conduct interviews.
- You can withdraw consent up to one month following the interview
- Do you have any questions before we start?
- Are you happy to sign the consent form and continue?

Worker Experience

- **Personal details (Ob1)**
    - Can I start by asking your age? (Age brackets?)
    - How would you describe your ethnicity?

- **Education (Ob1 and 3)**
    - Can you describe your highest level of formal educational?
        - GCSE's, A-Levels, Degree, MSc, Other qualifications?
    - Have you completed any education courses in your own time?
        - Why did you enrol on these?
        - How did you identify them?
        - What form did they take (e.g. evening, online, distance)?
        - Did you enjoy them? Why/ why not?
    - Are you interested in attending further education? Why/why not?
    - If so what kind of education are you interested in? Why is that?
        - Is this work related or something different?
    - Do you have any qualifications that are related to working with addiction? If so, what are they? When did you obtain them? Why did you obtain them?
        - If not, are you interested in gaining a qualification related to addiction?

- **Overall training needs (Ob3)**
    - What training do you think would be most important for a member of staff who was new to the field?
        - Which training do you think would be most useful for client work?
        - Which training do you think would be most useful for the more administrative or non-client facing side of your work work?

- **Work information (Ob1)**
    - **What is your job title?**
    - What happens at [*this workplace*] on a daily basis?
    - What treatments do you offer to clients?
    - Could you run through the main or routine tasks involved in your job?
    - How long have you worked in the addictions field?
    - And how long have you worked in this particular service?
    - What first attracted you to this line of work?
    - Have you worked at a service that has been recommissioned?
        - If so, how many times?
        - Have you been subject to TUPE or transferred between agencies as a result of recommissioning?
        - Has the TUPE process disrupted or affected your work?

        - If so, how?
    - Has the TUPE process disrupted or affected your training opportunities?
        - If so, how?

- **Current training (Ob2)**
    - Have you done any work-based training?
        - If so, what training have you completed? When did you complete it?
        - Who provided these training courses?
        - How was this training delivered? (e.g. workshop, online, lecture, individual)
        - Which training courses did you enjoy the most?
            - What made these courses more enjoyable?
        - Which training courses did you enjoy the least?
            - What made these courses less enjoyable?
        - How often do you attend work-based training?
            - Would you like to attend training more or less?

- **Your current training needs (Ob3)**
    - What future training would be most helpful for your client work?
    - What you think would be most helpful for the non-client, administrative side of your work? Why do you say that?
    - What are you most interested in attending?
    - What would be most useful for your career?
    - Are there any training courses that you would like to go on, but have not been able to? Which courses? Why would you want to attend them?
        - What prevented you accessing that training?
        - What could help you to attend training?

- **Barriers and facilitators to training (Ob5)**
    - How do you choose which training you attend?
        - What do you have to consider when choosing training (prompt; management needs, project needs, organisational requirements)
    - Have you ever been on training that you did not want to attend?
        - Why did you not want to attend this training?
    - Is there anything we've not spoken about that makes it difficult to attend training?
    - Is there anything that we've not spoken about that makes it easier to attend training?

- **How could evidence based practice and research findings be better communicated (Ob5)**
    - Are you interested in finding out more about addiction treatment-based research?
        - Why are you interested / not interested?

- Do you feel that you are able to find information on research that relates to addiction treatment?
- What sort of information do you access?
- ORANGE?
- How do you access research information?
- How could it be made easier or more interesting for you to find and use research about addiction?
- How could it be made easier for you to use research findings in your day to day practice?

- **Motivation for training (Ob6)**
  - Is there any way that your day to day work could be improved? If so, how?
    - What kinds of things do you like to achieve on a daily or weekly basis?
    - Which regular tasks would you like to be better or quicker at?
  - Are there any ways in which your client work could be improved?
    - How do you think that client treatment overall could be improved?
    - What do you like to achieve when working with clients? Why do you say that?
  - Do you have any specific career goals or aspirations?
    - What would you like to be doing in 5 or 10 years' time?
    - What, if any, kind of training might help you achieve these goals or aspirations?

Internet Technology

- **Types of technology (Ob7)**
  - What do you use to access the internet (prompt; laptop, smartphone, e-reader, TV etc.)
    - Are there any that you would like to use but that you do not have access to? (e.g. resource constraints)
    - Which methods do you prefer to use and why?
    - What other methods would you like to use and why? Why don't you currently use these methods?
  - Does your preference change depending on where you are?
    - How does it change?
  - What do you use to access the internet at work?
    - Do you experience any problems accessing the internet at work? (prompts: sound, access to a computer, slow connection, old technology, blocks on websites)

- **Purpose of internet use (Ob8)**
    - What do you mostly use the internet for?
    - What websites or apps do you find most useful outside of work?
    - What websites or apps do you find most useful for work?
    - Are there any sites or apps that you find particularly satisfying and rewarding to use?
        - Why?
    - What kind of online experiences do you find frustrating?
        - Why?

- **Online learning (Ob8)**
    - Have you ever done any online learning?
        - *If yes*
        - Was this related to work?
        - Was this arranged by or supported by work?
        - What types of online learning have you used?
        - How did you choose which online learning to use?
    - Are there any online learning or information tools that you enjoy using (prompt; databases, DAF, Wikipedia, forum, etc.)?
        - What do you find enjoyable about them?
    - Are there any online learning or information experiences that you find frustrating?
        - What do you find frustrating about them?

- **Confidence and competence (Ob9)**
    - How confident are you at using internet technologies?
        - Sending and receiving e-mail
        - Searching for information about goods and services online
        - Looking for health related information
        - Looking up research or finding evidence on best practice or interventions
        - Professional networking
        - Using an online forum
        - Booking things / enrolling
    - In terms of your internet skills, how skilled do you consider yourself to be?

- **Wider structural factors (Ob10)**
    - What kinds of things make it difficult to use the internet at work? (prompt; technology available, distractions, time, hot-desking, working culture)
    - What kinds of things prevent you from using the internet at home or on the go?
    - Are there any other factors that we have not talked about that affect how and when you use the internet?

- **A final question from me, do you think there is any value to staff training beyond developing skills and improving delivery of treatment?** (prompts: teambuilding, stress, personal development, confidence, legitimacy)
    - If so what are these?
    - How important are they?

- **Is there anything else that you would like to add that we have not covered?**

- **Thank you for taking part in this research**

16.3 Appendix III: Interview topic guide for key stakeholders

National Addiction Centre

Addictions Department

Institute of Psychiatry, Psychology and Neuroscience (IoPPN)

King's College London

Addictions Sciences Building

4 Windsor Walk

Denmark Hill

London SE5 8BB

Study 1 Topic Guide: Key Stakeholders

Record:

- Location
- Date and time
- Gender
- Participant ID

Introduction:

- Thank you for taking the time to speak to me for this interview. It will take under 60 minutes to complete, but you can stop at any time you want.
- There are no right or wrong answers. I am just interested in your thoughts and opinions. If you do not want to answer a question, you do not have to and we can move on. Anything you say will be kept completely confidential. If we do use any of your words when we write up the study, we will make sure you cannot be identified.

Housekeeping points:

- I am going to record the interview because it is too difficult for me to listen and write everything down at the same time. This is standard when we conduct interviews.
- Do you have any questions before we start?
- Are you happy to sign the consent form and continue?

Key Stakeholder experience

- **Work background**
    - What is your job title?
    - Can you briefly tell me what your job involves on a day to day basis?
    - Do you have contact with substance misuse service users as part of your job? If so, what? Why? How often?
    - Have you directly worked with substance misuse service users in the past? If so, tell me a bit more about that. When was that?
    - Do you have regular contact with substance misuse workers as part of your job? If so, what? Why? How often?
    - Are you interested in improving staff skills or knowledge?
    - Can you explain how you are interested in staff training?

    - Have you ever attended addiction training as a participant?
        - If so what?
        - Did you find it useful or interesting?
        - Why did you find it useful or interesting?
    - Have you ever delivered addiction training?
        - If so what did you deliver? When? To whom? Why?
        - What worked well? Why?
        - What did not work well? Why?

- **Overall training needs (Ob3)**
    - Are you aware of current training courses for substance misuse workers?
        - If so what training are you aware of? What do you know about the training eg. Eligibility, cost, location, duration, who provides it etc
        - What types of training courses are you aware of? (length, online, full or part time etc)
    - Are you involved in current training provision for substance misuse workers?
        - If so, what training are you involved in providing?
        - Which training courses do you consider to be a priority and why?
        - Is there any training that is not currently provided that you think should be provided?
            - Why do you think it is needed? Why do you think it is not provided?

- **Training needs (Ob3)**
    - What training do you think would be most important or useful for a project worker working face to face with clients who is new to the field?
        - Which training would be most useful for their day to day work? Why?
        - Which training would be most useful for their client work? Why?
        - Which training should be a priority? And why?

- What training do you think would be most important or useful for experienced workers?
    - Which training would be most useful for day to day work? Why?
    - Which training would be most useful for client work? Why?
- What training do you think is most important for improving the quality of addiction services? Why?
- Are there any training courses that you think are important but that are rarely offered?
- Are there any training courses that you think are important but that are rarely taken up?
    - What prevents this training from being offered or taken up?

- **Training barriers and facilitators (Ob5)**
    - In your experience, what makes training difficult to provide? Why?
    - What makes training easier to provide? Why?
    - What prevents staff from attending training? Why?
    - What improves attendance at training? Why?
    - What kind of training are staff reluctant to attend and why?
    - What kind of training are staff highly motivated to attend and why?
    - Is there anything we've not spoken about that makes it difficult to attend or provide training?
    - Is there anything that we've not spoken about that makes it easier to attend or provide training?

- **How could evidence based practice and research findings be better communicated (Ob5)**
    - Do you feel that you need to access research findings for your job? If so why, if not why not?
    - Do you feel that you are able to find information on research that relates to addiction treatment?
    - Are you interested in finding out more about addiction based research?
        - Why are you interested / not interested?
    - How could it be made easier or more interesting for you to find and use research about addiction?
    - How could it be made easier for you to use research findings in your day to day practice?

- Are there any wider structural factors that we've not yet mentioned that prevent training being offered or taken up?

- **A final question from me, do you think there is any value to staff training beyond developing skills and improving delivery of treatment?** (prompts: teambuilding, stress, personal development, confidence, legitimacy)
    - If so what are these?

- How important are they?

- **Is there anything else that you would like to add that we have not covered?**

- **Thank you for taking part in this research**